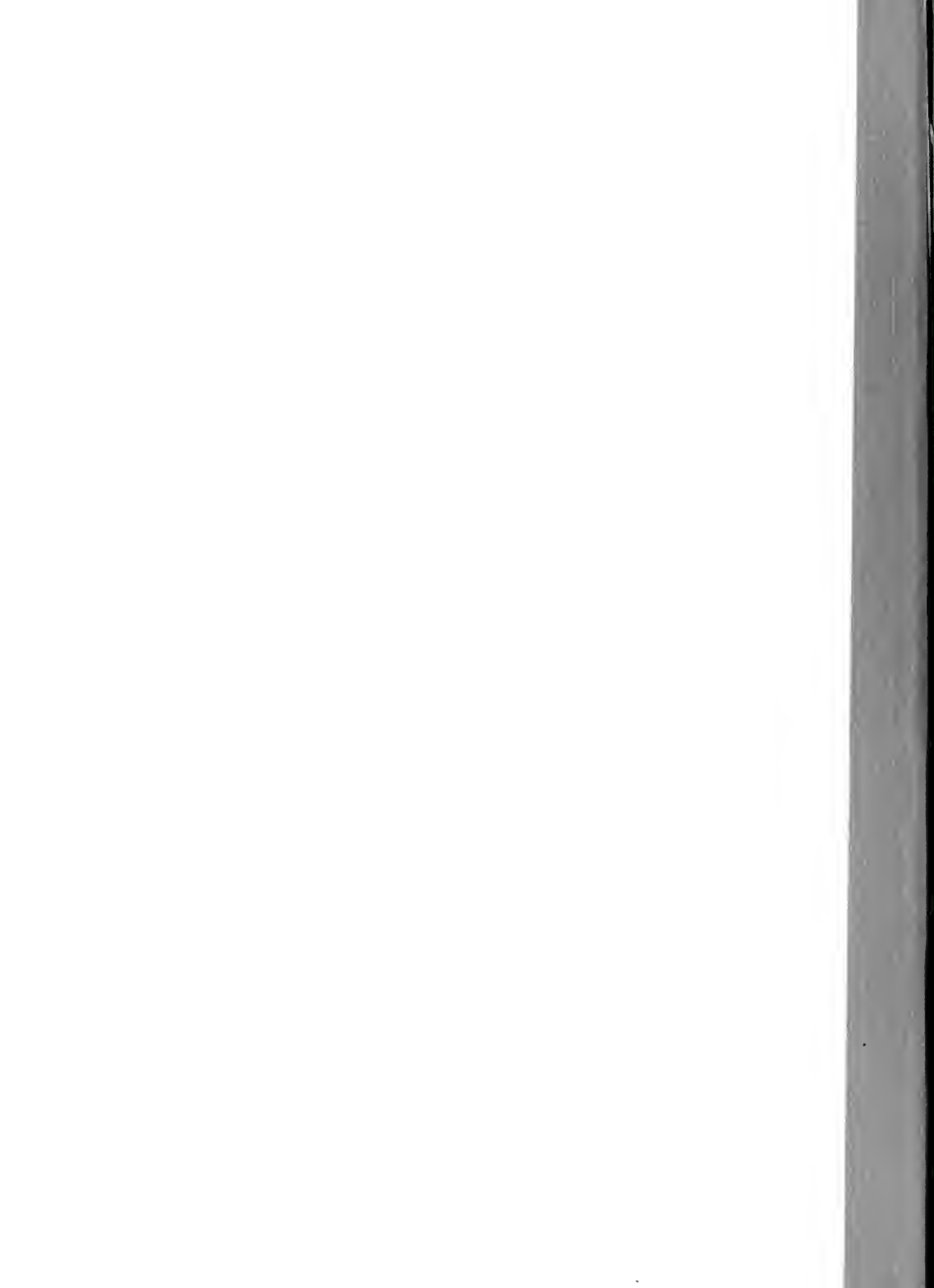


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13-2

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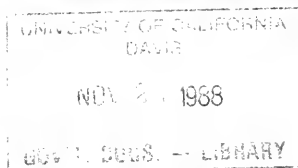
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130-85

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ANNEX



Bulletin 130-85
May 1988

HYDROLOGIC DATA 1985

Volume I: North Coastal Area



Gordon K. Van Vleck

Secretary for Resources
Water Resources Agency

George Deukmejian

Governor
State of California

David N. Kennedy

Director
Department of Water Resources



ON THE COVER The northwest coast, rugged in its grandeur, forms a bulwark to the sea.

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Bulletin 130-85

HYDROLOGIC DATA 1985

Volume I:
North Coastal Area

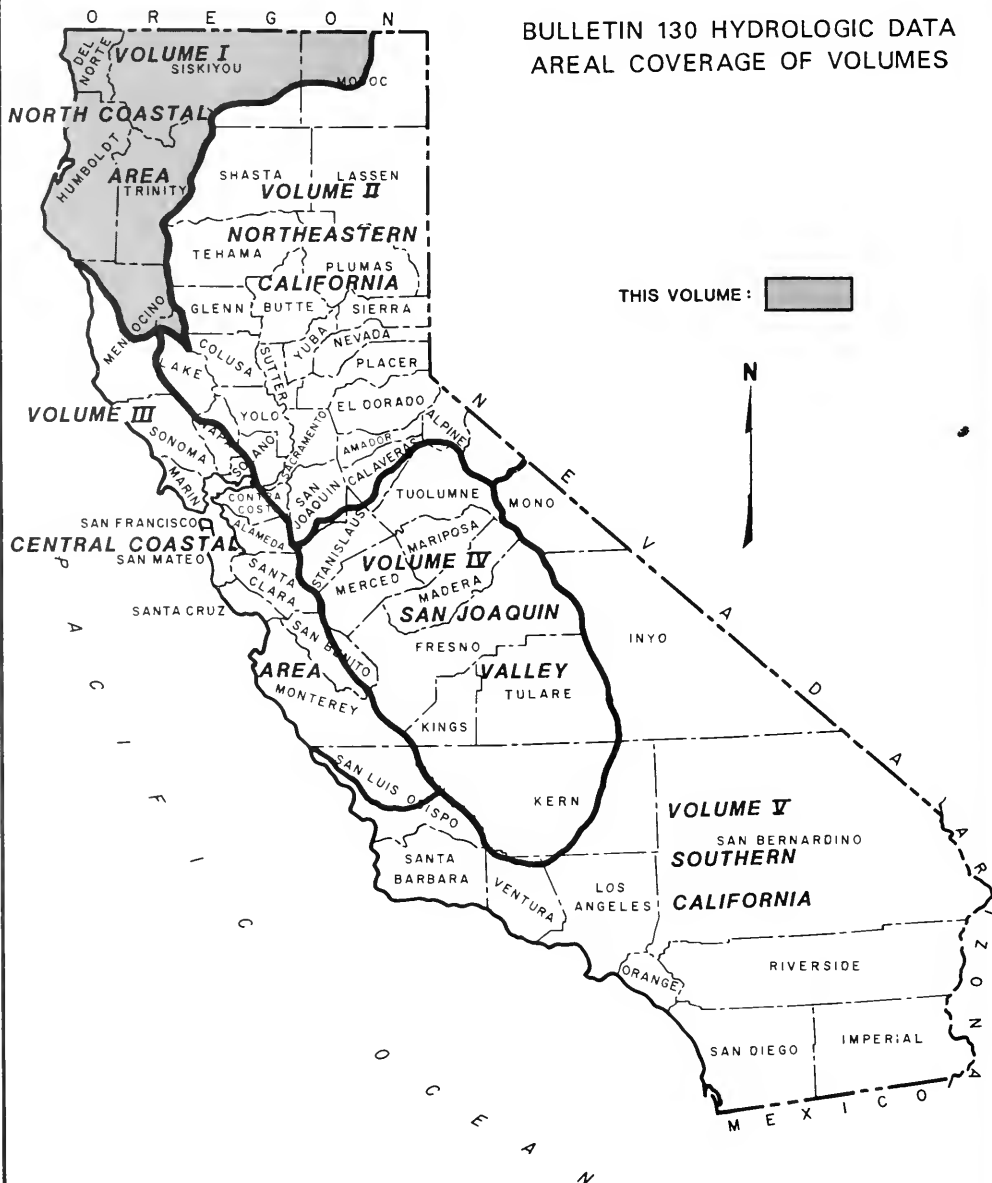
May 1988

Gordon K. Van Vleck
Secretary for Resources
The Resources
Agency

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BULLETIN 130 HYDROLOGIC DATA
AREAL COVERAGE OF VOLUMES

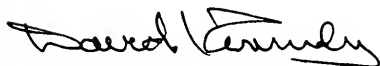


FOREWORD

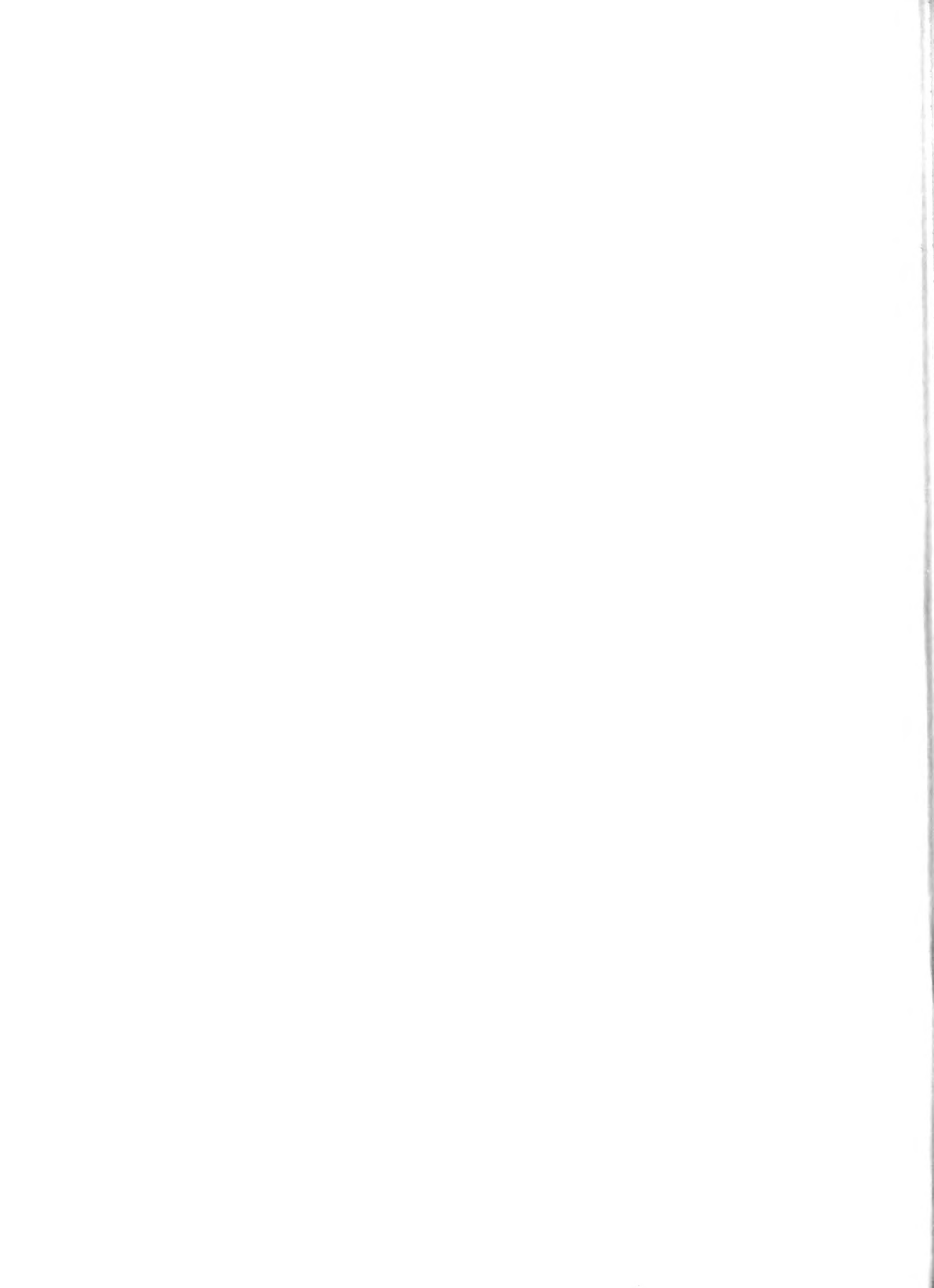
Department of Water Resources' Bulletin 130 series, which presents hydrologic data for California, was published annually from 1963 to 1975. The series was discontinued with the advent of the storage and retrieval of hydrologic data by electronic data processing methods. However, continued interest in the series prompts resumption of publication.

The first in the resumed series is Bulletin 130-85. It contains hydrologic data for the 1985 water year (October 1, 1984 through September 30, 1985). The Bulletin is published in five volumes, each of which reports on one of the five areas of the State delineated on the facing map. This volume covers North Coastal California.

The data collection program of the Department of Water Resources supplements similar activities by other agencies to obtain the information required for effective water resources planning, design and operation of water facilities, and for control and management of the State's water resources.

A handwritten signature in black ink, appearing to read "David Kennedy", with a stylized flourish at the end.

David N. Kennedy, Director
Department of Water Resources



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The California Water Commission serves as a policy advisory body to the Director of Water Resources on all California water resources matters. The nine-member citizen commission provides a water resources forum for the people of the State, acts as a liaison between the legislative and executive branches of State Government, and coordinates federal, state, and local water resources efforts.

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City of Willets
Fruit Growers Supply Company
National Parks Service
National Weather Service
Pacific Lumber Company
Pacific Power and Light Company
Tule Lake Irrigation District
U. S. Bureau of Indian Affairs
U. S. Bureau of Reclamation
U. S. Forest Service

INTRODUCTION

Bulletin 130-85 presents data on the quantity and quality of California's water resources for the water year October 1, 1984 through September 30, 1985. These data were collected by the Department of Water Resources and other organizations cooperating with the Department. The data are published in five volumes (for areal coverage of volumes see page ii). This volume encompasses North Coastal California. Each volume contains data presented in five appendixes as follows:

Appendix	Subject
A	Precipitation Measurements
B	Surface Water Measurements
C	Surface Water Quality
D	Ground Water Measurements
E	Ground Water Quality

Inquiries regarding the data in this publication should be directed to the offices of the Department of Water Resources listed inside the back cover. The Department's files also contain some data currently not being published, which are also available from these offices.

Additional information about the availability of hydrologic data for California will be found in Department of Water Resources Bulletin 230 series "Index to Sources of Hydrologic Data." This reference series presents an inventory of historic hydrologic data on file with the Department. The most recent issue is Bulletin 230-81. A new edition is in preparation.

Station Location and Identification

The locations of precipitation, surface water measurement and surface water quality data stations are shown on figures included with the respective appendix. Because they are so numerous relative to the figure scale, the locations of individual wells for which depths to ground water and water quality are presented cannot be shown. Instead, figures are presented showing the locations of ground water basins or areas for which well data are listed in this volume.

The principal identifiers for locating hydrologic data stations are (1) station name, (2) station number, (3) latitude and longitude, (4) township, range and section (T,R and S) and (5) county. All are used in this publication, but vary with the type of data and common usage. For example, in ground water the township, range and section serve as the station name and number.

A sixth identifier, an areal one, is employed in this publication. Called the "Areal Designation Code," it is the signature for the Department's Areal Designation System which was developed to relate all water resources data to areal location. The Areal Designation System and Code are described in the following section.

Detailed explanations of the station names and station numbers used for each type of data appear with the appendix in which the data appear.

Latitude is the angular measurement from the equator, north or south, to a point of interest on the earth's surface. Longitude is the angular measurement from the prime meridian (zero point) at Greenwich, England, east or west, to a point of interest on the earth's surface. Latitude and longitude are given in degrees, minutes and seconds. A difference of one second of latitude represents about 100 feet on the ground. In California, a difference of one second of longitude represents about 85 feet on the ground.

Areal Designation Code

The areal designation code (called simply the "areal code") is an alphanumeric which designates a specific hydrologic area in the State.

Areal designation defines hydrologic boundaries throughout California. Under this system, the State is divided into four geographic levels based on topography, hydrology, geology and occasionally, institutional considerations. These are designated, in decreasing size, hydrologic basin (HB), hydrologic unit (HU), hydrologic area (HA) and hydrologic subarea (HSA). The first level, the hydrologic basin, is the land area defined by the highest surrounding ridges such that each separate land area is easily identified as independent of the others. There are 12 hydrologic basins in California and each is identified by a letter (see Figure 1). Each of the hydrologic basins is divided into a hydrologic unit which encompasses a major watershed, two or more small contiguous watersheds having similar characteristics, or a closed drainage area. The third level of subdivision is the hydrologic area and the fourth and smallest breakdown is the hydrologic subarea. The latter usually is a single ground water basin, a definable portion of a larger ground water basin, a tributary area of a stream system, or a definable portion of a large stream tributary.

The code used to identify each subdivision consists of five characters; a letter for the hydrologic basin; two numerics for the hydrologic unit; a letter for the hydrologic area; and a single numeric for the hydrologic subarea; i.e., F-03.A1 designates the Smith River Plain Hydrologic Subarea in this volume.

Because several stations may be located in a given hydrologic subarea, the areal code facilitates locating and comparing nearby stations be they precipitation, streamflow, water quality or ground water stations. The areal code is used as an identifier for all stations in this report. The Water Data Information System (WDIS), a computerized data system of the Department of Water Resources, can retrieve all data types by areal code.

Areal codes and boundaries for this volume appear on Figure 2. A map showing all areal codes and boundaries in California as well as a list of all 1,309 subdivisions and their names is available on request.

Agency Code

Reference is made in various tables in this publication to code numbers used to identify agencies collecting data, operating stations, or performing laboratory analysis (Lab). The agencies or laboratories may be identified by matching the tabulated code number with one of the code numbers listed at the beginning of the respective appendix. A complete cross index of agencies and code numbers is available on request.

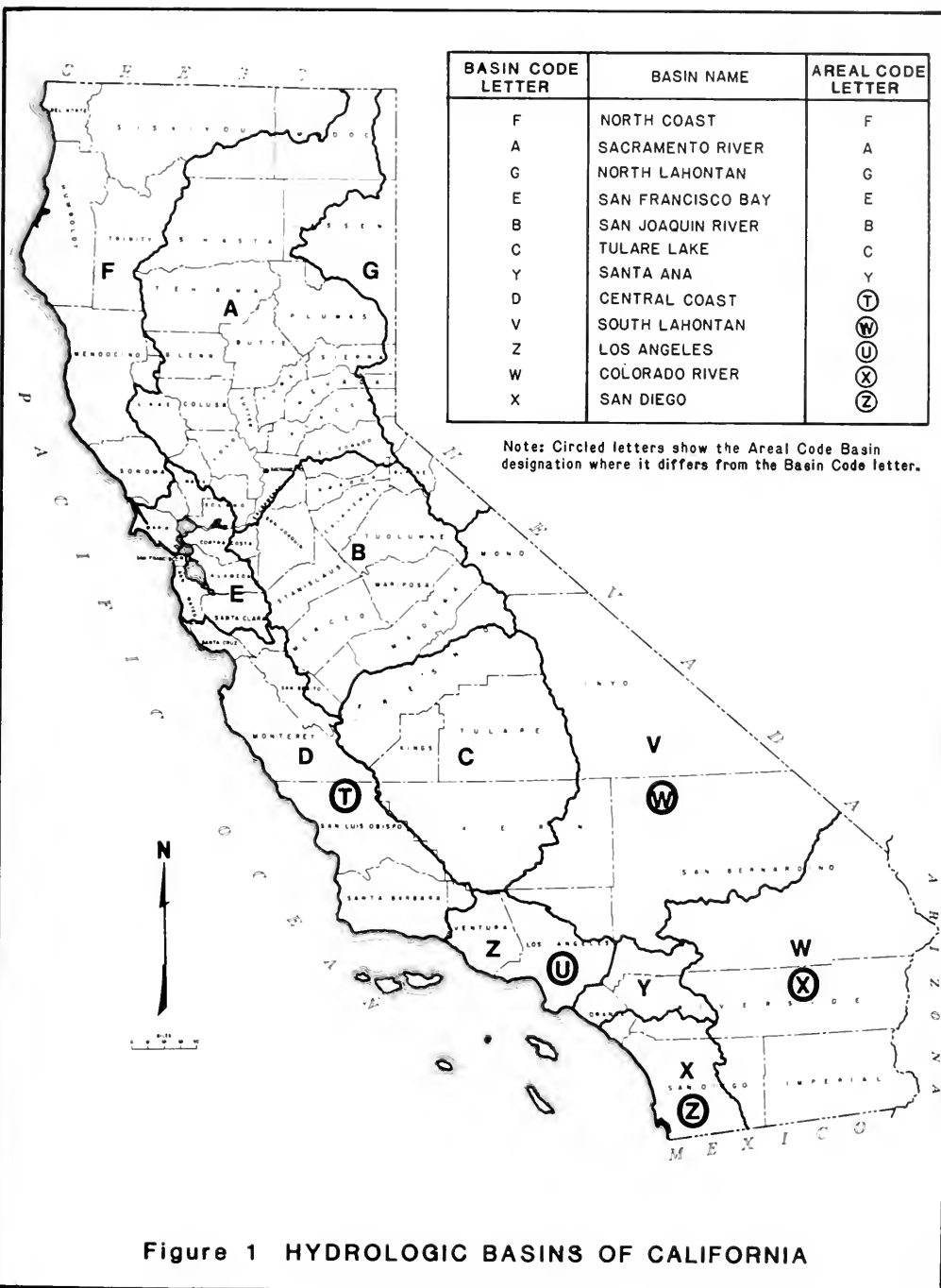


Figure 1 HYDROLOGIC BASINS OF CALIFORNIA

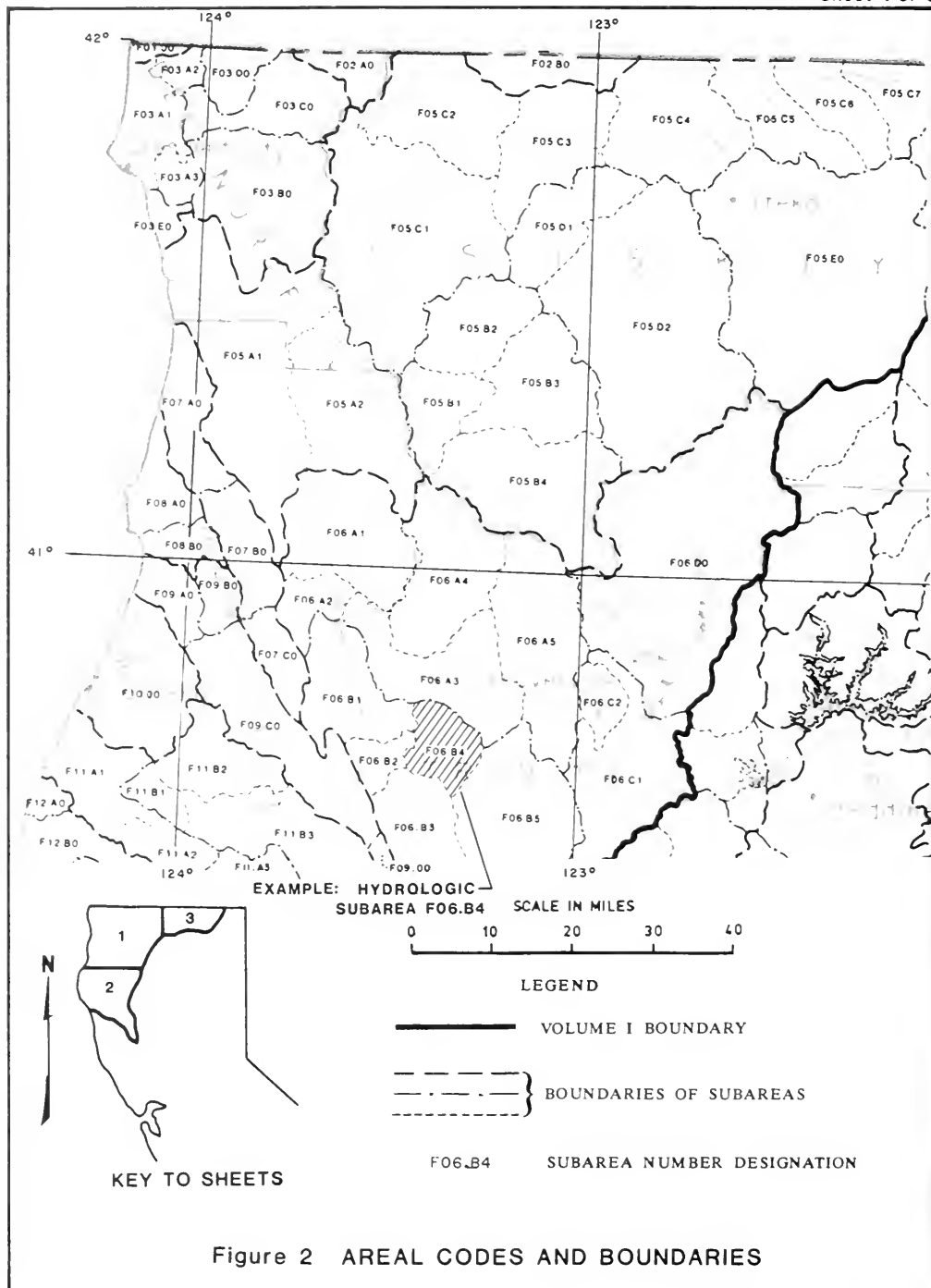
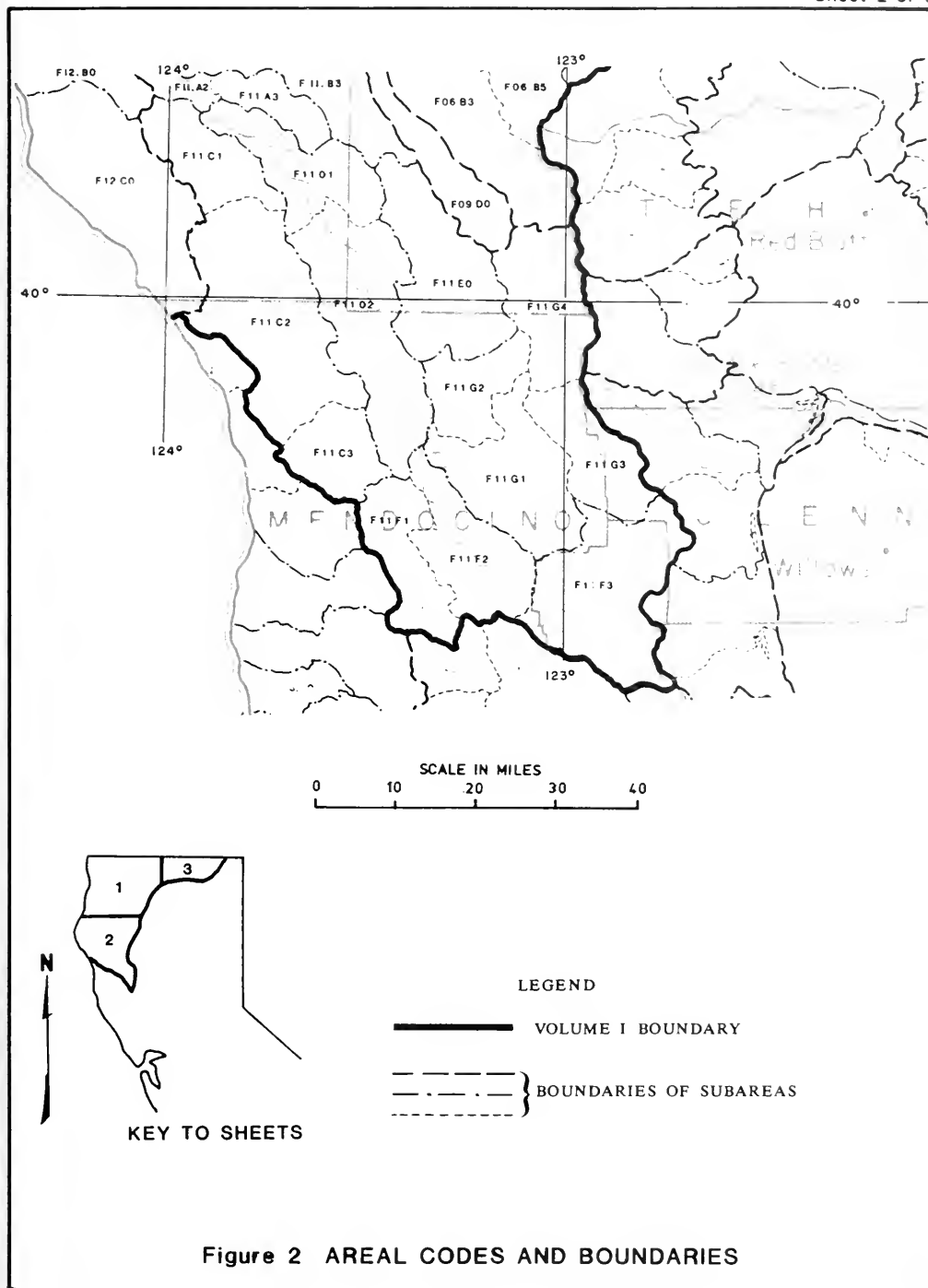


Figure 2 AREAL CODES AND BOUNDARIES



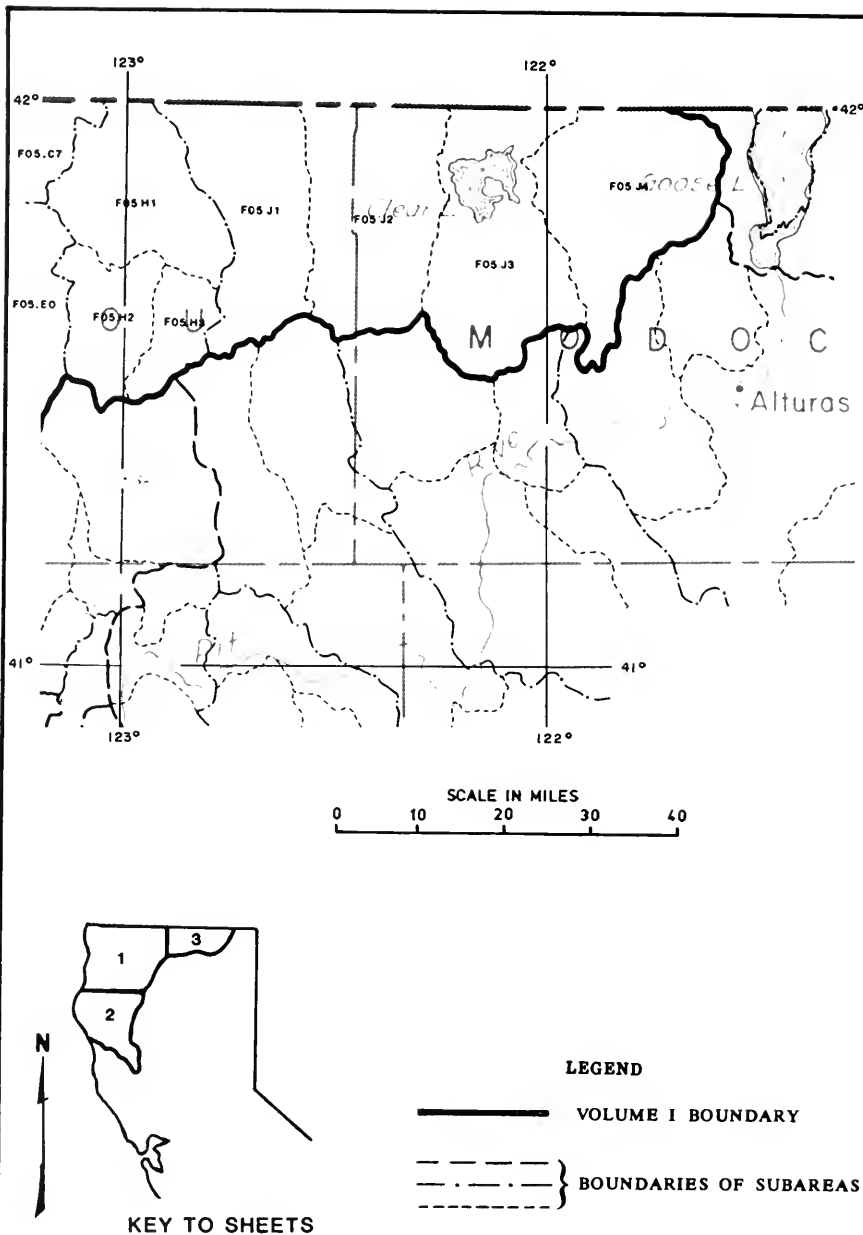


Figure 2 AREAL CODES AND BOUNDARIES

APPENDIX A

CLIMATOLOGICAL DATA

APPENDIX A

CLIMATOLOGICAL DATA

Appendix A presents precipitation data for certain climate stations (Table A- 1) and storage gages (Table A-2) in the North Coastal Area for the water year October 1, 1984 through September 30, 1985. The location of the stations is shown on the facing map.

The first three characters of the nine character station number indicate the major basin ("F" in this volume) and tributary area in which the station is located. The code numbers and names of the tributary areas for this volume are:

Code No.	Tributary	Code No.	Tributary
00	Smith River	40	Trinity River
10	Lost River-Butte Valley	50	Mad River
20	Shasta-Scott Valleys	60	Eel River
30	Klamath River	70	Mattole River

The fourth through the ninth characters denote the sequence of the stations under an alphanumeric system developed by the National Weather Service. (The fourth through seventh characters are the same as the four-digit station numbers used by the National Weather Service.) To simplify presentation the first three characters and the last two (if they are zero) are omitted from Figure 3.

Climatological stations are often named after the nearest post office and the distance and direction to the station. Distance is in miles, and the direction is represented in one of 16 compass points. For example, Bridgeville 4 NNW denotes a station located 4 miles north northwest of the post office at Bridgeville. When two observers (stations) are situated in the same general location, the town name is sometimes followed by the name of the observer. For example; Briceland-Wolf, where Briceland is the place name and Wolf is the observer. The responsibility for selecting the station name generally rests with the agency or individual who establishes the station.

The space for station names is restricted to a combination of 25 letters and/or numerals; therefore, some abbreviations are necessary. Common abbreviations are:

AP	-	Airport
FS	-	Fire Station
HMS	-	Highway Maintenance Station
LO	-	Lookout
PH	-	Power House
RS	-	Ranger Station
SP	-	State Park
STA	-	Station

The Department gives latitude and longitude to the nearest second when the value is known, but the National Weather Service lists stations by degree and minute only. A zero value or a blank space for "seconds" in the latitude and longitude columns means that these values have been obtained from the National Weather Service, and have not been verified in the field by the Department.

Elevations are given in feet from USGS mean sea level datum, and are usually obtained by interpolation between contours of USGS topographic maps.

Precipitation values are shown to the nearest hundredth of an inch (0.01"). (Where digital recording rain gages that only record to the nearest tenth of an inch are used, a zero is shown in the second decimal place.)

The following notations are used to qualify the values:

-	No record or incomplete record
B	Record began
E	Estimated in some degree
N	Record ends
.00T	Trace, an amount too small to measure

TABLE A-1
MONTHLY PRECIPITATION
NORTH COASTAL AREA

EAL OE	STATION NUMBER	LAT	LONG	ELEV	STATION NAME	TOTAL	PRECIPITATION IN INCHES												
							1												
							1984	1985											
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
6A3	F40073800	40 44	123 14	1,270	Big Bar Ranger Station	29.66	3.19	15.50	2.12	.53	3.26	3.27	.12	.47	.12	.06	.24	.78	
5E0	F20073671	41 35	122 19	2,955	Big Springs 4 E	11.06	1.63	2.93	1.18	.00	1.26	.10	.00	.76	.56	1.43	.82	1.39	
1C3	F60104600	39 41	123 39	1,480	Branscomb 3 NW	63.18	7.58	27.25	4.98	1.38	9.57	9.53	.55	.86	.08	.00	.00	1.40	
1B2	F60103000	40 31	123 49	2,050	Bridgeville 4 NNW	57.92	7.32	24.68	5.78	1.07	6.66	7.65	.85	1.29	1.01	.02	.36	1.23	
1B3	F60108300	40 28	123 48	650	Bridgeville Fire Station	43.22	4.34	18.08	4.44	.87	4.63	7.49	.32	.73	.29	.00	.35	1.68	
1C1	F60118100	40 21	124 06	410	Bull Creek	62.43	5.26	31.95	5.24	1.29	5.50	8.30	.95	2.90	.17	.00	.07	.37	
1C1	F60121000	40 18	123 54	200	Burlington State Park	54.31	4.36	28.67	5.09	.88	4.52	8.20	.36	.39	.27	.00	.52	1.05	
6A3	F40121500	40 47	123 28	2,150	Burnt Ranch 1 S	---	---	---	---	---	4.62	4.03	.25	.75	.35	.10	.45	1.10	
5D2	F20131601	41 24	122 50	---	Callahan	16.98	1.50	7.40	.42	.31	2.12	.99	.37	.70	.45	1.23	.08	1.41	
5B4	F30160510	41 08	123 08	2,960	Cecilville 1 SE	---	---	---	---	---	---	---	---	---	---	---	.70	1.07	
5B4	F30160600	41 06	123 03	2,980	Cecilville 5 SE	---	---	---	---	---	---	---	.54	1.03	.37	.39	---	---	
5C7	F30199000	41 59	122 20	2,770	Copco Dam No 1	20.13	2.45	6.22	2.00	.08	2.34	1.03	.30	1.47	.42	.97	.19	2.56	
1G2	F60208100	39 47	123 15	1,385	Covelo	31.85	3.22	15.81	2.52	.44	4.34	4.02	.20	.10	.00	.20	1.00	---	
3A1	F00214700	41 46	124 12	40	Crescent City 1 N	53.55	6.60	19.15	4.42	.52	6.49	7.31	1.09	1.58	4.62	.11	.05	1.61	
3A1	F00214800	41 48	124 05	120	Crescent City 7 ENE	---	8.03	20.78	4.78	.78	8.11	9.46	1.50	2.35	4.58	.21	.07	---	
530	F00215200	41 45	123 59	360	Crescent City 11 E	79.16	7.57	32.11	5.88	.84	9.99	12.52	1.64	2.42	3.81	.19	.05	2.11	
1C2	F60221800	39 50	123 38	1,270	Cummings	57.75	6.38	25.72	5.00	1.18	7.79	7.90	.52	.78	.29	.00	.05	2.14	
3E0	F00236305	41 41	124 06	720	Del Norte Coast Redwood SP	78.08	9.08	25.12	6.71	1.07	10.62	11.63	2.04	2.83	5.94	.21	.32	2.51	
8B0	F30236010	41 30	124 03	880	Del Norte Ecology Center	68.65	9.21	23.99	5.65	.62	7.67	9.55	1.44	3.48	4.22	.48	.31	2.03	
1C2	F60269500	40 08	123 49	460	Del River Conservation Camp	52.10	3.86	28.09	4.84	.71	4.29	7.71	.24	.66	.17	.00	.20	1.33	
000	F60291000	40 48	124 10	43	Eureka WSD City	36.33	3.67	15.15	4.27	.66	3.69	4.68	.45	1.14	.89	.15	.52	1.05	
9A0	F50304100	40 56	124 01	285	Fieldbrook 4 D Ranch	31.07	9.65	23.25	11.20	.07	10.10	12.75	2.30	2.50	5.85	.85	.30	3.05	
5C5	F30132200	41 48	122 22	2,960	Foothill School	18.03	1.65	5.61	1.23	.25	1.62	.77	.10	1.21	.22	1.49	1.41	2.47	
2C0	F40131000	40 73	123 20	2,340	Forest Glen	---	3.15	24.73	3.32	1.03	4.90	4.66	.38	.33	.04	---	---	---	
3A1	F00131700	41 52	124 09	46	Fort Dick	62.63	8.08	22.52	5.11	.71	7.30	8.25	1.45	1.98	4.62	.41	.21	1.99	
5D2	F20318200	41 36	122 51	2,720	Fort Jones Ranger Station	20.58	1.91	9.56	.72	.17	2.40	1.89	.11	.75	.33	1.18	.39	1.17	
1A1	F60319400	40 36	124 09	60	Fortuna Fire Station	40.68	4.42	18.06	4.46	.73	4.19	5.67	.32	.94	.54	.05	.27	1.03	
1C1	F60321703	40 18	124 03	2,500	Fox Camp	54.37	6.31	32.99	5.93	1.33	5.87	8.70	.65	.50	.77	.02	.06	1.24	
5C2	F00335700	41 52	123 58	384	Gasquet Ranger Station	77.26	8.75	31.38	5.45	1.00	8.88	11.61	1.37	3.07	3.52	.26	.03	1.94	
5D2	F20361400	41 33	122 54	2,818	Greenview	---	---	---	---	.04	1.82	1.45	.00	2.40	.09	.35	.00	.70	
5E0	F20363220	41 35	122 33	2,720	Grenada 5 SSW	13.50	1.36	4.22	.54	.33	1.45	.31	.06	.91	.82	1.00	.06	2.44	
1B3	F60364700	40 29	123 47	500	Grizzly Creek Redwood SP	49.05	4.29	21.70	5.20	.95	4.15	9.30	.23	.89	.51	.00	.25	1.29	
3B0	F30376100	41 48	123 23	1,090	Happy Camp Ranger Station	45.26	4.37	24.05	2.11	.56	6.17	5.19	.36	.86	.98	.00	.01	.60	
1D2	F60373500	39 59	123 36	1,910	Harris 7 SSE	58.48	9.23	25.56	5.58	1.10	5.70	8.29	2.04	.48	2.25	.01	.20	3.38	
6B5	F40385900	40 33	123 10	2,340	Hayfork Ranger Station	---	2.40	15.23	2.08	.54	2.22	3.62	.10	---	.11	.18	1.15	1.88	
530	F30397000	42 00	122 38	2,900	Hills	---	1.45	7.12	1.19	---	---	---	---	---	---	---	---	---	
1C2	F60403702	40 25	123 57	150	Holmes	46.43	3.40	23.10	4.00	.65	4.11	8.64	.33	.55	.27	.00	.29	1.04	
1C0	F70407410	40 15	124 07	339	Honeydew Store	---	2.26	35.21	5.25	1.37	---	---	---	---	---	---	---	---	
6A1	F40408200	41 03	123 40	350	Hoopa	49.48	5.47	23.77	3.31	.46	5.74	7.38	.24	.92	.46	.04	.18	1.51	
6A1	F40420200	41 54	123 46	1,250	Idelwild HMS	66.98	7.54	29.11	4.46	.80	7.21	9.70	1.29	2.23	2.18	.20	.00	2.23	
5A1	F30457770	41 31	124 02	25	Klamath	69.06	9.01	29.58	5.87	.97	9.45	10.37	.99	2.14	3.61	.30	.34	1.62	
5A2	F10483800	41 43	121 30	4,770	Lava Beds National Monument	11.03	1.46	2.22	.82	.07	1.08	1.59	.02	.49	.36	.83	.21	1.88	
5C0	F50524400	40 27	123 32	2,775	Lava River Ranger Station	47.19	5.01	24.29	2.74	.99	5.74	5.53	.46	.31	.13	.03	.42	1.57	
1C0	F50524500	40 27	123 32	2,775	Mendocino Headlands SP	32.51	5.26	12.32	2.25	2.85	5.71	.25	.31	.08	.18	.05	.27	---	
5N1	F10594100	41 47	122 00	4,250	Mount Hebron Ranger Station	10.44	1.51	2.88	.66	.01	.65	.51	.14	.38	.15	.74	.05	2.76	
03C0	F30632900	41 50	123 51	1,963	Oak Knoll Ranger Station #2	21.46	2.33	10.41	1.26	.10	2.61	2.55	.18	.57	.39	.14	.15	.77	
07A0	F50649701	41 19	124 02	50	Orick 3 HNE	56.57	6.89	21.69	5.90	.30	6.44	7.28	.10	1.66	2.05	.07	.37	1.31	
07A0	F50649702	41 19	124 02	75	Orick Arcata Redwood	53.89	6.67	21.28	5.69	.87	5.33	7.17	1.05	1.76	2.57	.00	.73	.77	
07A0	F50649900	41 22	124 01	161	Orick Prairie Creek SP	57.91	7.20	20.95	5.65	1.04	7.87	8.16	1.20	1.57	2.43	.17	.34	1.33	
05A2	F30650800	41 18	123 32	403	Orleans	48.65	6.06	21.20	3.53	.89	5.94	6.48	.18	.92	1.56	.25	.28	1.36	
12C0	F70683500	40 19	124 16	175	Petrolia	48.27	3.94	23.05	5.51	1.15	4.26	7.11	.31	.85	1.02	.02	.04	1.01	
12C0	F70683550	40 15	124 15	1560	Petrolia 5 SSE	77.33	7.48	36.62	6.21	2.03	8.87	10.45	.92	1.62	1.85	.00	.00	1.28	
07C0	F50734200	40 54	123 49	950	Redwood Creek Okane	41.90	3.70	16.50	4.30	.80	3.20	3.00	.80	1.40	1.00	.10	.30	1.80	
11C2	F60740400	40 02	123 47	500	Richardson Grove State Park	59.22	5.31	29.58	4.54	.82	6.81	8.09	.80	.77	.50	.00	.28	1.72	
05B3	F30802500	41 18	123 08	2,169	Sawyers Bar Ranger Station	---	4.93	15.67	1.91	.39	4.79	3.36	.46	.59	.66	.24	---	1.12	
11A2	F60804500	40 29	124 06	139	Scottia	38.63	3.22	18.70	3.44	.55	3.61	6.18	.46	.65	.41	.04	.24	1.13	
12C0	F70816200	40 02	124 04	55	Shelter Cove Aviation	48.95	7.95	13.49	4.64	1.14	4.69	9.24	1.41	1.75	1.04	.15	.00	3.45	
05C1	F30834605	41 23	123 29	727	Sonsbar Ukonom RS	48.82	6.64	19.12	3.36	.58	7.94	5.85	.42	.74	1.74	.17	.78	1.48	
11C2	F60834900	39 52	123 43	950	Standish Hickey State Park	54.02	4.44	22.66	4.39	1.08	8.62	8.76	.28	.95	.17	.00	.03	2.64	
1000	F60866850	40 52	124 04	70	Sunny Brae	42.86	4.63	16.51	3.59	.78	4.75	5.25	.66	1.41	1.25	.05	.63	1.57	
06C1	F40092660	40 43	122 48	1,860	Trinity River Hatchery	---	3.15	13.33	2.02	.49	2.62	2.56	.23	.54	.38	.21	---	1.00	
05J2	F10905300	41 58	121 28	4,035	Tulelake	10.27	1.90	2.53	.94	.24	.57	.57	.47	.47	.33	.34	.18	1.73	
12C0	F70917700	40 15	124 11	255	Upper Mattole	---	5.20	32.81	5.51	1.31	5.98	8.37	.30	.72	.82	.00	---	---	
06C2	F40949000	40 44	122 56	2,050	Weaverville Ranger Station	32.54	3.39	16.89	2.36	.56	2.92	3.58	.23	.19	.49	.19	.42	1.32	
05E0	F20949300	41 26	122 23	3,593	Weed FD	17.55	---	8.85	9.42	.53	.07	.91	.95	.35	.62	.35	1.60	.09	1.81
13A2	F80950430	39 3																	

TABLE A-2
STORAGE GAGE PRECIPITATION DATA

Storage gages are used to record seasonal precipitation in remote regions. They are read annually and are located on tanks which store an entire year's precipitation. Although logistics preclude conducting the measurement exactly at the end of the water year, the gages reasonably depict the total precipitation for the water year since precipitation during the summer months is negligible. In preparation for a new water year, the tanks are emptied, cleaned, and supplied with antifreeze and oil to prevent freezing and loss due to evaporation. Table A-2 lists the values from the storage gages.

The counties in which storage gages are located are identified with the codes listed below:

County	Code
Del Norte	DNT
Glenn	GLE
Modoc	MOD
Siskiyou	SIS
Trinity	TRI

TABLE A-2
STORAGE GAGE PRECIPITATION DATA
NORTH COASTAL AREA

Volume I Station Name	Station Number	Areal Code	County	Lat.	Long.	Elev.	Measurement Period	Precipitation (inches)
North Coastal Hydrologic Basin								
Smith River Camp Six L.O.	F00 144600	F03B0	DNT	41-49-48	123-52-24	3700	10/29/84 to 10/23/85	96.16
Lost River - Butte Valley								
Crowder Flat	F10 218400	F05F4	MOD	41-53-00	120-44-00	5175	07/26/84 to 06/20/85	15.75
Long Bell Station	F10 508100	A2303	MOD	41-28-00	121-25-00	4375	07/17/84 to 06/25/85	18.65
Medicine Lake	F10 550500	A23C3	SIS	41-35-00	121-37-00	5660	07/17/84 to 06/25/85	32.90
Shasta - Scott Valleys Gazelle Mtn. L.O.	F20 336300	F05D2	SIS	41-24-30	122-40-30	5200	07/16/84 to 06/24/85	14.00
Klamath River Blue Creek Mtn. L.O.	F30 089900	F03C0	DNT	41-23-42	123-45-54	4870	11/16/84 to 10/08/85	71.05
Trinity River Mumbo Basin	F40 603200	F06D0	TRI	41-12-00	122-32-00	5700	07/18/84 to 06/26/85	41.80
Eel River Plaskett	F60 697600	F11G3	GLE	39-44-12	122-51-24	6580	07/10/84 to 06/13/85	58.28



APPENDIX B

SURFACE WATER MEASUREMENT

APPENDIX B

SURFACE WATER MEASUREMENT

Appendix B presents stream flow measurement data in the North Coastal Area for the water year October 1, 1984 to September 30, 1985. The locations of the stations are shown on the facing map.

The first two characters of the station number indicate the major basin ("F" in this volume) and tributary area in which the station is located. The code numbers and names of the tributary areas for this volume are:

Code No.	Tributary	Code No.	Tributary
0	Smith River	4	Trinity River
1	Lost River-Butte Valley	5	Mad River
2	Shasta-Scott Valleys	6	Eel River
3	Klamath River	7	Mattole River

Surface water stations are named after the stream and a nearby landmark or post office. An example is the station "Trinity River, North Fork, near Helena."

The tables give the daily mean flow at designated stations. In addition, the maximum and minimum discharge and gage height for the water year and the maximum discharge and gage height of record is summarized. The datum and other pertinent data concerning each station are also shown.

The discharge estimated for periods of no record are shown with the letter "E." Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures have been rounded as follows:

Daily flows - second-feet

0.0	-	9.9	nearest Tenth
10	-	999	nearest Unit
1,000	-	9,999	nearest Ten
10,000	-	99,999	nearest Hundred
100,000	-	999,999	nearest Thousand

Monthly means - second-feet

0.0	-	99.9	nearest Tenth
100	-	9,999	nearest Unit
10,000	-	99,999	nearest Ten
100,000	-	999,999	nearest Hundred

Monthly and yearly totals - acre-feet

0.0	-	9,999	nearest Unit
10,000	-	99,999	nearest Ten
100,000	-	999,999	nearest Hundred
1,000,000	-	9,999,999	nearest Thousand

STATION NUMBER: F21700 SHASTA RIVER NEAR EDGEWOOD

DRAINAGE AREA: Not Available

HYDROLOGIC AREA: F-05.E0

WATER DAY	YEAR OCT	OCTOBER NOV	1984 through DEC	JAN	SEPTEMBER 1985 FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	DAY
1	23	27	114	56	51	65	54	56	42	11	24	10	1
2	20	160	104	54	53	66	59	63	59	12	16	18	2
3	19	124	108	56	53	61	59	66	41	10	14	19	3
4	21	69	101	56	49	63	68	54	35	9.7	13	17	4
5	19	55	96	56	50	57	78*	47	33	9.6	13	16	5
6	19	66	88	56	51	54	122	43	32	10	13	16	6
7	19	59	82	64	55	55	160	51*	33	10	12	19	7
8	19	57	79	61	79	44	162	46	37	9.9	10	29	8
9	21	52	95	61	60	41	154	38	36	10	11	37	9
10	23	153	122	57	55	40	151	35	34	9.8	10	28	10
11	29	274	127	54	57	42	138	34	30	10	11	25	11
12	26	615E	109	53	72	41	118	29	26	9.6	11	24	12
13	25	491	99	53	71	39*	117	25	24	9.0	10	23	13
14	24	201	89	53*	68	37	142	24	23	8.9	10	24	14
15	24	145	92	53	69	37	170	23	22	9.7	10	24	15
16	25	128	89	53	69*	38	163	24	20	11	9.9	25	16
17	28	113	81	53	65	40	143	26	19	11	9.1	24	17
18	28	128	79*	55	67	42	121	26	18*	9.6	9.4	23	18
19	31	99*	69	57	64	42	107	26	15	8.4	13	22	19
20	32	129	68	57	63	42	92	27	14	7.8	14	22	20
21	30	122	71	56	61	43	73	28	13	8.5	13	22	21
22	28	97	68	55	62	40	63	29	13	9.7	11	21	22
23	27	91	64	55	64	39	56	34	14	9.4	9.8	19	23
24	27	125	62	54	65	46	49	37	14	9.5*	9.0	19	24
25	27*	98	63	54	68	45	44	43	13	9.2	8.3	19	25
26	27	83	63	54	67	42	39	44	13	8.9	7.8	19	26
27	27	93	63	52	65	47	38	41	12	8.4	7.4	19	27
28	28	168	61	56	64	50	41	43	11	8.1	7.1	18	28
29	33	140	59	54	64	51	43	51	10	7.0	7.2	19	29
30	30	122	59	52	53	48	38	38	10	8.1	7.9	19	30
31	28		59	51	54	54	38			26	9.0		31

MEAN	25.4	143	83.3	55.2	62.0	47.0	95.7	38.4	23.9	10.0	11.0	21.3
MAX	33	615E	127	64	79	66	170	66	59	26	24	37
MIN	19	27	59	51	49	37	38	23	10	7.0	7.1	10
ACFT	1561	8497	5123	3394	3445	2888	5697	2358	1420	614	676	1267

MEAN FLOW	INSTANTANEOUS	MAXIMUM	FLOW, 1984-5	INSTANTANEOUS	MINIMUM	FLOW, 1984-5	TOTAL
	DATE	TIME	FLOW G.H.	DATE	TIME	FLOW G.H.	ACRE FEET
51.0	November 12	0015	617E 3.22	July 29	1715	6.4 0.96	36940

Station located 200 feet downstream from Edgewood Road Bridge on left bank.

Flows affected by upstream diversions.

Station moved 700 feet upstream to present location on October 1, 1979.

Period of record for discharge is from March 1961 to October 1967 and from October 1978 to date.

Period of record for gage height is the same as for discharge.

The datum for this station from 1979 to present is 0.0, local.

FOR PERIOD OF RECORD BEGINNING 1961:

	FLOW	GAGE		
	CFS	HEIGHT	DATE	TIME
INSTANTANEOUS MAXIMUM	3320	6.65	January 26, 1983	1830
AVERAGE/YEAR	Not Available			

E = Estimated. NR = No record. * = Discharge measurement or observation of no flow.

TABLE B (CONTINUED)
DAILY MEAN DISCHARGE
IN CUBIC FEET PER SECOND

STATION NUMBER: F42100 NORTH FORK TRINITY RIVER AT HELENA

LOCATION: LAT 40-46-55, LONG 123-07-38, T34N, R11W, SEC. 20M, MD B&M TRINITY COUNTY

DRAINAGE AREA: 151.0 SQ MILES

HYDROLOGIC AREA: F-06.A5

WATER DAY	YEAR OCT	OCTOBER NOV	1984 DEC	through JAN	SEPTEMBER FEB	1985 MAR	APR	MAY	JUN	JUL	AUG	SEP	DAY
1	32	90	852	218	203	405	812	519	187	83	45	27	1
2	32	1020	745	212	196	381	1170	525	193	81	43	28	2
3	30	734	676	210*	186	350	1300	474	175	81	38	28	3
4	29	357	614	210	177	336	1250	382	201	80	35	26	4
5	30	242	565	215	170	315	1240	351	222	79	33	26	5
6	30	355	555	227	165	300	1320	351	392	77	32	26	6
7	30	378	541	255	192	288	1280	324	401	74	31	27	7
8	30	400	534	261	232	265	1160	308	335	72	31	37	8
9	34	405	519	273	228	254	1090	289	276	68	32	39	9
10	42	996	665	263	230	254	1060	270	252	65	32	46	10
11	119	2530	811	253	227	252	939	251	245	61	30	44	11
12	98	4540	737	245	495	257	812	239	275	59	29	40	12
13	217	2750	645	238	605	254	843	255	279	57	29	38	13
14	106	1640	570	231	578	255	949	288*	245	56	28	48	14
15	76	1080	532	228	607	261	968	269	243	54	28	46	15
16	76	800	469	249	680	275	802	295	225	53	27	39	16
17	72*	684	430	330	650	285	666	316	239	52	26	35	17
18	67	796	403	396	574	284	578	326	253	50	32	34	18
19	93	735	365	392	522*	295	507	338	242	47	37	32	19
20	136	705	343	385	481	307	450	328	226	45	34	29	20
21	102	648	321	374	445	302	418	316	195	45	32	28	21
22	87	567	300	354	459	282*	387	336	161	49*	30	27	22
23	83	550	289	333	506	270	370	390	152	47	28	26	23
24	82	805	279	312	518	325	356	394	133	43	27	26	24
25	77	722	273	290	505	281	334	379	113	40	26	28	25
26	104	610	270	272	472	289	321	383	100	39	28	28	26
27	98	679	259	255	432	290	360	311	96	40	28	27	27
28	110	1240	248	246	405	273	397	287	94	45	28	27	28
29	180	1070*	235	230	265	412	246	92	42	42	27	27	29
30	132	874	223	220	322	449	213	88	41	41	27	27	30
31	105		225	210	505		193		41	26			31

MONTHLY													
MEAN	81.9	967	468	271	398	299	767	327	211	57.0	30.9	32.2	
MAX	217	4540	852	396	680	505	1320	525	401	83	45	48	
MIN	29	90	225	210	165	252	321	193	88	39	26	26	
ACFT	5036	57520	28760	16640	22100	18400	45620	20120	12560	3503	1902	1916	

MEAN FLOW	INSTANTANEOUS DATE	MAXIMUM FLOW TIME	1984-5 G.H.	INSTANTANEOUS DATE	MINIMUM FLOW TIME	1984-5 G.H.	TOTAL ACRE FEET
323	November 12	0645	5470 14.30	September 6	2215	24 5.01	234077

REMARKS:

Station located 1.0 miles above mouth, 0.6 miles north of Helena.

Stage-discharge relationship affected by ice at times.

Period of record for discharge is from September 1957 to Date. Period of record for gage height is the same as discharge.

The datum for this station from 1957 to present is 0.0, local.

FOR PERIOD OF RECORD BEGINNING	1957: FLOW CFS	GAGE HEIGHT	DATE	TIME
INSTANTANEOUS MAXIMUM	35800	27.93	December 22, 1964	Not Available
AVERAGE/YEAR	Not Available			

E = Estimated. NR = No record. * = Discharge measurement or observation of no flow.



APPENDIX C

SURFACE WATER QUALITY

APPENDIX C

SURFACE WATER QUALITY

Appendix C lists surface water quality data for the North Coastal Area measured from October 1, 1984 to September 30, 1985. The data are presented in categories, as follows:

Table	Title
C-1	Mineral Analyses of Surface Water
C-2	Minor Element Analyses of Surface Water
C-3	Miscellaneous Analyses of Surface Water
C-4	Nutrient Analyses of Surface Water

The locations of the stations are shown on the facing page.

The first two characters of the station number indicate the major basin ("F" in this volume) and tributary area in which the station is located. The code numbers and names of the tributary areas for this volume are:

Code No.	Tributary	Code No.	Tributary
0	Smith River	4	Trinity River
1	Lost River-Butte Valley	5	Mad River
2	Shasta-Scott Valleys	6	Eel River
3	Klamath River	7	Mattole River

As with surface water measurement stations, surface water sampling stations are named after the stream and a nearby landmark or post office. An example of this is the station "Eel River, South Fork, near Miranda." If a sampling station is situated at the site of a surface water measurement station, each uses the same name.

Surface water quality stations are listed in the tables by ascending station number. The station number is found to the left, and the areal code to the right of the station name. The areal code is described on page 2.

To facilitate use of the surface water quality tables, a sampling station index is provided on page 25. This index lists the stations in the tables and gives location data for each. Also, the number of pages referenced indicates the extent of analysis for each station.

In order to increase the amount of information presented in the water quality tables, multiple headings are used at the top of the column, and data tabulated respectively. For example, the first column of Table C-1 shows the date of sampling printed above the time of sampling so the data are tabulated in that order. If a part of the values for a multiple heading column are obtained, they will appear in the column with respect to the heading positions. If dashes (or no data) appear in a column, it means no data was obtained.

At the time of field sampling, dissolved oxygen, pH, temperature, specific conductance and gage height are determined.

Abbreviations and codes used in each table are explained at the beginning of each table.

SAMPLING STATION INDEX
North Coastal Area

Station	Station Number	Location*	Areal Code	Beginning of Record	Analyses on Page
BBY C NR SOMESBAR	F3 2264.00	14N/06E-22 H	F05C1	APR. 1984	43
BAIR A CAPETOWN	F7 5100.00	01N/03W-13 H	F12B0	MAY 1964	53, 59, 63
LAI BUTTE R NR COVELO	F6 3200.00	23N/11W-28 M	F11C1	NOV. 1964	53, 59, 63
LAI ENGLE LK NR FAIRVIEW BOAT RAMP	F4 L 049.0 245.9	34N/08W-10 M	F06D0	JULY 1976	40, 63
LE C NR HAPPY CAMP	F3 2315.00	15N/07E-07 H	F05C1	DEC. 1971	44, 45, 59, 62
JOIC NR SOMESBAR	F3 2325.00	14N/06E-14 H	F05C1	DEC. 1971	45
DPI LK NR COPO	F3 L 158.8 220.0	48N/04W-29 M	F05C7	JULY 1973	29, 61
ILIN C NR SOMESBAR	F3 2260.00	14N/06E-28 H	F05C1	NOV. 1971	42, 43, 59, 62
WELL RES NR DAM	F2 R 132.3 222.6	43N/05W-25 H	F05E0	JUNE 1973	27, 61
EL A SCOTIA	F6 1100.00	01N/01E-05 H	F11A2	APR. 1951	51
EL A SOUTH FORK	F6 1154.50	01S/02E-26 H	F11C1	APR. 1951	51
EL AB OUTLET C NR DOS RIOS	F6 1329.50	21N/13W-31 M	F11F2	APR. 1958	51, 52
EL MF A DOS RIOS	F6 .009.01	21N/13W-06 M	F11D2	APR. 1958	52, 59, 63
EL MF AB BLACK BUTTE R	F6 3120.01	23N/11W-28 M	F11G1	FEB. 1965	52, 59
EL SF NR MTRANDA	F6 4100.00	03S/04E-30 H	F11C2	APR. 1951	53, 63
LK A MO A HAPPY CAMP	F3 4199.00	17N/07E-15 H	F05C1	AUG. 1984	49, 63
LLT C NR SOMESBAR	F3 2265.00	14N/06E-22 H	F05C1	DEC. 1971	43
T FF C NR SEIAD VALLEY	F3 1425.00	46N/12W-05 M	F05C2	APR. 1984	38
RI R C NR SEIAD VALLEY	F3 4245.00	46N/12W-14 M	F05C3	SEPT. 1971	49
ND ENDCENCE C NR CLEAR CREEK	F3 4180.00	15N/07E-30 H	F05C1	APR. 1984	49
ND N C AT MOUTH	F3 2329.00	16N/07E-11 H	F05C2	AUG. 1954	46, 47, 55, 59, 62
ND N C A SF INDIAN C BR	F3 2305.00	17N/07E-08 H	F05C2	APR. 1984	44
ND N C BL MILLPOND	F3 2303.00	17N/07E-22 H	F05C2	AUG. 1954	44
ND N C EF A MO	F3 2304.00	17N/07E-09 H	F05C2	APR. 1984	44
ND N C NR HAPPY CAMP	F3 2299.00	17N/07E-26 H	F05C2	SEPT. 1958	44
ND N C SF A BAR	F3 2306.00	17N/07E-07 H	F05C2	APR. 1984	44
MOATE RES NR HORN BROOK	F3 R 156.0 226.1	47N/05W-09 M	F05C6	JUNE 1963	29, 61
RVG C NR SOMESBAR	F3 4155.00	12N/06E-04 H	F05C1	NOV. 1971	48
LATH R A KLAMATH GLEN	F3 1095.00	13N/02E-13 H	F05A1	JULY 1951	29, 61
LATH R A ORLEANS	F3 1220.01	11N/06E-31 H	F05A2	JAN. 1964	29, 30, 55, 57, 61
LATH R A R COLLIER REST STOP	F3 1585.00	46N/06W-08 M	F05C5	SEPT. 1973	42
LATH R A SARAH TOTTEN CAMPGROUND	F3 1460.00	46N/10W-31 M	F05C3	APR. 1984	40, 41, 55, 59, 62
LATH R AB DILLON C	F3 1330.00	14N/06E. 28 H	F05C1	NOV. 1971	33, 34, 57, 62
LATH R AB HAMBURG RES SITE	F3 1470.00	46N/10W-14 M	F05C3	DEC. 1958	41
LATH R AB HAPPY CAMP	F3 1395.00	16N/07E-01 H	F05C2	APR. 1984	37, 38, 57, 62
LATH R AB INDEPENDENCE CREEK	F3 1333.00	15N/07E-30 H	F05C1	MAY 1984	34, 35, 57, 62
LATH R AB OAK FLAT CREEK	F3 1336.00	15N/07E-05 H	F05C1	APR. 1984	35, 36, 37, 55, 57, 62
LATH R AB SALMON RIVER	F3 1302.00	11N/06E-04 H	F05A2	OCT. 1956	30, 31, 57, 62
LATH R AB TI CREEK	F3 1327.00	14N/06E-09 H	F05C1	APR. 1984	32, 33, 55, 57, 62
LATH R BELOW SHASTA R	F3 1575.00	46N/07W-13 M	F05C4	SEPT. 1971	42
LATH R BL IRON GT DM	F3 1599.01	47N/05W-20 M	F05C6	DEC. 1961	42, 59, 62
LATH R NR SEIAD VLY	F3 1430.00	46N/12W-03 M	F05C2	DEC. 1958	38, 39, 40, 55, 57, 62
LLE GRIDER C A HAPPY CAMP	F3 2329.00	16N/07E-15 H	F05C2	AUG. 1984	45
ADI NR ARCATIA	F5 1100.00	06N/01E-15 H	F09A0	NOV. 1958	50, 51
ATLE R NF A PETROLIA	F7 2100.00	02S/02W-04 H	F12C0	OCT. 1977	53
ATLE R NR PETROLIA	F7 1100.00	02S/02W-11 H	F12C0	JAN. 1959	53, 59, 63
IL C NR COVELO	F6 3050.00	22N/12W-22 M	F11G1	MAR. 1953	52, 63
ENL C AT MOUTH	F3 4253.00	46N/11W-22 M	F05C3	JUNE 1972	49
AKLAT C NR HAPPY CAMP	F3 2317.00	15N/07E-05 H	F05C1	APR. 1984	45
QIT C NR LONGVALE	F6 1350.00	20N/14W-01 M	F11F2	MAY 1958	52
OFJUESE C NR SEIAD VALLEY	F3 2355.00	46N/12W-04 M	F05C2	SEPT. 1971	47
EDOD C A ORICK	F5 5100.00	10N/01E-04 H	F07A0	NOV. 1958	51
ALON R A SOMESBAR	F3 4100.00	11N/06E-02 H	F05B1	NOV. 1958	47, 48, 59, 63
AM BAR C NR SOMESBAR	F3 4160.00	13N/06E-29 H	F05C1	NOV. 1971	49
ICK R NR FORT JONES	F2 5250.00	44N/10W-29 M	F05D2	DEC. 1958	28, 57, 61
ED C NR SEIAD VALLEY	F3 2365.00	46N/12W-12 M	F05C3	SEPT. 1971	47
WITA R AB YREKA C	F2 1055.00	45N/06W-06 M	F05E0	MAY 1973	27, 28, 57, 61
WITA R NR GREYADA	F2 1350.00	44N/06W-23 M	F05E0	APR. 1947	28, 57, 61
WITA R NR YREKA	F2 1050.00	46N/07W-24 M	F05E0	DEC. 1958	27, 57, 61
WHA R NR CRESCENT CITY	F0 1300.00	16N/01E-11 H	F03C0	APR. 1951	27
WUP C NR SOMESBAR	F3 2270.00	14N/06E-14 H	F05C1	OCT. 1950	44
WUPSON CR NR HAPPY CAMP	F3 1417.00	17N/08E-17 H	F05C2	APR. 1984	38
WEEK NR SOMESBAR	F3 4170.00	13N/06E-16 H	F05C1	NOV. 1971	49
WITY R A HOOPA	F4 1080.00	08N/04E-25 H	F06A1	APR. 1951	50, 63
WITY R A LEWISTON	F4 1640.00	33N/08W-17 M	F06C1	APR. 1951	50, 63
WITY R NR BURNT RH	F4 1376.00	05N/07E-19 H	F06A3	APR. 1958	50
WIDUZEN R NR BRIGEVILLE	F6 5279.00	01N/02E-12 H	F11B3	APR. 1958	53, 59, 63
WIER C NR SEIAD VALLEY	F3 4250.00	46N/11W-18 M	F05C3	SEPT. 1971	49

* Humboldt Base and Meridian
* Mount Diablo Base and Meridian

TABLE C-1
MINERAL ANALYSES OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations and Constituents

TIME	-	Pacific Standard Time on a 24-hour clock			
G. H.	-	Instantaneous gage height in feet above an established datum			
Q	-	Instantaneous discharge in cubic feet per second (E = Estimated)			
DO	-	Dissolved oxygen content in milligrams per liter			
SAT	-	Percent of normal dissolved oxygen saturation			
TEMP	-	Water temperature at time of sampling in degrees Fahrenheit (F) or Celcius (C)			
Field	-	Determined in the field			
Laboratory	-	Determined in the laboratory			
pH	-	Measure of acidity or alkalinity of water			
EC	-	Electrical conductance in microseimens at 25°C			
Constituents:					
	B	- Boron	K	-	Potassium
	CA	- Calcium	MG	-	Magnesium
	CACO3	- Calcium Carbonate	NA	-	Sodium
	CL	- Chloride	NO3	-	Nitrate
	F	- Fluoride	SIO2	-	Silica
			SO4	-	Sulfate

Boron, Fluoride, and Silica are reported in milligrams per liter. The other minerals are reported in each of three units; milligrams per liter, milliequivalents per liter, and percent reactance value; accordingly, each observation can use three lines of tabulation.

MILLIEQUIVALENTS PER LITER is the concentration in Mg/l divided by the equivalent weight of the ion.

PERCENT REACTANCE VALUE is determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter, arriving at a percentage.

- TDS - Gravimetric determination of total dissolved solids at 180°C
- SUM - Total dissolved solids by summation of analyzed constituents minus 40 percent of analyzed constituents
- TH - Total Hardness
- NCH - Noncarbonate hardness - any excess of total hardness over total alkalinity
- TURB - Jackson Turbidity Units measured with Hellige Turbidimeter (E) or a Hach Nephelometer (A) with (F) for field determinations
- SAR - Sodium Adsorption ratio
- ASAR - Adjusted sodium adsorption ratio
- REM - Remarks; code letter are:
 - T - Total dissolved solids and the calculated sum of constituents are not within 20 percent of each other.
 - E - Total Dissolved Solids (TDS) value is not within the range of 0.35 to 0.70 of the electrical conductivity.
 - S - The anion sum and cation sum for a complete analysis is not within the prescribed tolerance of ± 5 percent.

TABLE C-1
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. O	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	PE

FO 1300.00 SMITH R NR CRESCENT CITY F03CO																			
10/22/84	5050	0.85	11.3	50.9F	7.8	125	--	--	--	--	--	--	--	--	--	--	--	--	--
1700	5050	075	101	10.5C										1AF	--				
12/03/84	5050	14.65	12.5	48.2F	7.3	02	--	--	--	--	--	--	--	--	--	--	--	--	--
1425	5050	0110	100	9.0C										3AF	--				
02/05/85	5050	9.13		41.0F	7.4	111	6.0	9.0	2.0	--	48	--	2.0	--	--	0	--	52	0.1
1450	5050	1010		5.0C	8.0	106	.30	.74	.09	--	.96	--	.06	--	--	1A	--	4	0.1
						27	65	8											
04/16/85	5050	10.69	11.6	50.0F	7.4	08	--	--	--	--	--	--	--	--	--	--	--	--	--
0730	5050	2200	103	10.0C										3AF	--				
35/04/85	5050	9.44	10.8	57.2F	7.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--
1720	5050	1210	105	14.0C										1AF	--				
08/05/85	5050	7.77	10.1	69.8F	8.2	137	--	--	--	--	--	--	--	--	--	--	--	--	--
1640	5050	360	113	21.0C										1AF	--				
09/30/85	5050	7.51	10.5	60.8F	8.0	138	--	--	--	--	--	--	--	--	--	--	--	--	--
1530	5050	258	106	16.0C										1AF	--				
F2 R 132.3 222.6 OAKMELL RES NR OH F05EQ																			
05/22/85	5050		9.9	68.0F	8.3	268	14	27	15	1.9	--	7.0	6.0	--	--	.1	--	146	0.0
1000	5050		119	20.0C			.70	2.22	.65	.05	--	.13	.17	--	--	2AF	--		
		0					19	61	18	1									
09/19/85	5050		9.4	63.0F	8.4	345	16	28	19	2.2	--	8.0	9.0	--	--	.2	--	155	0.0
1300	5050		107	17.2C			.80	2.30	.83	.06	--	.17	.25	--	--	4AF	--		
		0					20	58	21	2									
F2 1250.00 SHASTA R NR YREKA F05EQ																			
10/23/84	5050	3.50	10.4	53.8F	8.4	478	--	--	--	--	--	--	--	--	--	--	--	145	--
1430	5050	220	103	12.0C										3A	--				
11/26/84	5050	3.83	12.3	41.9F	8.4	533	--	--	--	--	--	--	--	--	--	--	--	--	--
1630	5050	338	104	5.5C										4AF	--				
12/18/84	5050	3.74	12.0	40.1F	8.4	518	30	32	37	--	247	--	10	--	--	.4	--	207	1.1
0945	5050	304	99	4.5C	8.2	530	1.50	2.63	1.61	--	4.94	--	.54	--	--	3A	--	0	2.4
							26	46	28										
01/08/85	5050	3.61	11.2	44.8F	8.4	480	--	--	--	--	--	--	--	--	--	--	--	--	--
1600	5050	254	96	7.0C										3AF	--				
02/27/85	5050	3.68	11.9	47.3F	8.6	439	--	--	--	--	--	--	--	--	--	--	--	--	--
1200	5050	294	109	8.5C										4AF	--				
03/12/85	5050	3.59	12.5	48.2F	8.6	468	--	--	--	--	--	--	--	--	--	--	--	--	--
1235	5050	233	115	9.0C										4AF	--				
04/16/85	5050	4.16	9.5	62.6F	8.6	534	--	--	--	--	--	--	--	--	--	--	--	--	--
1535	5050	107	105	17.0C										3AF	--				
05/06/85	5050	3.07	10.0	64.4F	8.5	550	37	37	38	--	283	--	21	--	--	.2	--	245	1.1
1315	5050	91	113	18.0C	8.2	573	1.85	3.04	1.65	--	5.65	--	.59	--	--	3A	--	0	2.4
							28	46	25										
06/13/85	5050	2.84	9.2	80.6F	8.6	591	--	--	--	--	--	--	--	--	--	--	--	--	--
1420	5050	52	123	27.0C										3AF	--				
07/09/85	5050	2.62	9.1	77.0F	8.6	636	--	--	--	--	--	--	--	--	--	--	--	--	--
1145	5050	24	117	25.0C										2AF	--				
08/21/85	5050	2.73	9.0	62.6F	8.6	615	--	--	--	--	--	--	--	--	--	--	--	398	--
0620	5050	37	99	17.0C										1A	--				
09/10/85	5050	3.48	9.5	57.2F	8.4	585	--	--	--	--	--	--	--	--	--	--	--	380	--
1125	5050	210	99	14.0C										7A	--				
F2 1055.00 SHASTA R AB YREKA C F05EQ																			
10/23/84	5050		10.5	51.8F	8.1	504	--	--	--	--	--	--	--	--	--	--	--	--	--
1155	5050	1206	103	11.0C										4AF	--				
11/26/84	5050		12.0	42.8F	8.2	548	--	--	--	--	--	--	--	--	--	--	--	--	--
1645	5050	2006	104	6.0C										6AF	--				
12/18/84	5050		12.0	39.2F	8.1	518	--	--	--	--	--	--	--	--	--	--	--	--	--
0915	5050	3036	99	4.0C										3AF	--				
01/08/85	5050		12.5	44.6F	9.3	489	28	30	30	--	235	--	21	--	--	.4	--	194	1.2
1625	5050	2006	111	7.0C	9.7	514	1.40	2.47	1.70	--	4.70	--	.59	--	--	3A	--	0	2.6
							25	44	31										
02/27/85	5050		12.0	44.4F	9.3	428	25	27	35	--	213	--	16	--	--	.4	--	174	1.2
1220	5050	2406	109	8.0C	8.4	470	1.25	2.22	1.52	--	4.26	--	.51	--	--	4A	--	0	2.4
							25	44	30										

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q	D.D. SAT	TEMP	FIELD LABORATORY PM EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER B F TOS MCH				REMARKS
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TUBS	SIDE	TOS SUP	MCH	
F2 1255.00 SHASTA R AB TREKA C F0502 CONTINUED																		
03/12/85 1305	5050 5050		175E	12.2 119	51.8F 11.0C	8.4	447	--	--	--	--	--	--	--	--	--	--	
04/16/85 1125	5050 5050		150E	11.1 121	50.0F 16.0C	8.2 9.0	575 597	34 1.70	35 2.96	46 46	-- 2.00	267 5.73	-- --	26 .73	-- 2A	--	233 0	
05/08/85 1300	5050 5050		60E	12.1 132	60.8F 16.0C	8.2	495	--	--	--	--	--	--	--	--	--	--	
05/13/85 1050	5050 5050		35E	9.7 122	73.4F 23.0C	8.3 7.7	649 653	49 2.45	50 4.11	94 2.35	-- 26	322 6.43	--	25 .71	-- 3A	--	328 7	
07/09/85 1125	5050 5050		35E	9.5 125	77.0F 25.0C	8.6 8.5	627 623	38 1.40	39 3.21	48 2.09	-- 29	307 6.13	--	26 .73	-- 2A	--	256 0	
08/19/85 1345	5050 5050		40E	10.3 127	71.6F 22.0C	8.4	656	--	--	--	--	--	--	--	--	--	--	
07/10/85 1105	5050 5050		130E	9.0 95	56.1F 14.5C	8.0	578	--	--	--	--	--	--	--	--	--	--	
F2 1350.00 SHASTA R WP GRENADA F0502																		
10/23/84 1115	5050 5050		125E	10.2 100	51.8F 11.0C	7.9	442	--	--	--	--	--	--	--	--	--	--	
11/26/84 1230	5050 5050		202E	11.7 105	44.6F 7.0C	7.9	491	--	--	--	--	--	--	--	--	--	--	
12/17/84 1330	5050 5050			11.9 104	42.8F 8.0C	8.0	457	--	--	--	--	--	--	--	--	--	--	
01/04/85 1150	5050 5050		250E	10.3 100	46.4F 6.0C	8.0	449	--	--	--	--	--	--	--	--	--	--	
02/25/85 0940	5050 5050		130E	10.0 95	50.0F 10.0C	9.0 8.3	426 451	23 1.15	29 2.38	34 4.8	-- 1.48	203 4.06	--	16 .51	-- 2A	--	177 0	
03/12/85 1140	5050 5050		120E	10.7 102	49.1F 9.5C	8.2 8.6	437 437	21 1.05	26 2.14	32 1.33	-- 47	196 3.92	--	19 .54	-- 1A	--	160 0	
04/16/85 1030	5050 5050		150E	9.5 126	52.6F 17.0C	8.2	476	--	--	--	--	--	--	--	--	--	--	
05/08/85 1220	5050 5050		125E	12.1 133	60.8F 16.0C	8.3	583	--	--	--	--	--	--	--	--	--	--	
06/13/85 1010	5050 5050		50E	8.3 99	58.0F 20.0C	8.1	494	--	--	--	--	--	--	--	--	--	--	
07/09/85 1050	5050 5050		100E	9.5 118	70.7F 21.5C	8.2	476	--	--	--	--	--	--	--	--	--	--	
08/19/85 1305	5050 5050		130E	10.4 120	65.3F 14.5C	8.2	462	--	--	--	--	--	--	--	--	--	--	
07/10/85 1020	5050 5050		130E	8.8 94	58.1F 14.5C	7.9	498	--	--	--	--	--	--	--	--	--	--	
F2 0250.00 SCOTT R WP FORT JONES F0502																		
11/26/84 1330	5050 5050		66E	13.0 108	39.2F 4.0C	7.4	178	--	--	--	--	--	--	--	--	--	154	
01/08/85 1305	5050 5050		6.25 33A	12.9 113	41.0F 5.0C	7.9	222	--	--	--	--	--	--	--	--	--	--	
03/12/85 1420	5050 5050		9.14 113	11.3 109	49.1F 9.5C	8.2 9.6	217 221	21 1.02	13 1.07	4.0 4.7	-- 17	100 3.00	--	3.0 .64	-- 1A	--	106 5	
05/04/85 1330	5050 5050		6.88 93E	9.9 126	56.1F 14.5C	8.1 8.4	153 151	13 6.5	9.0 7.4	3.0 1.3	-- 9	70 1.40	--	2.0 .06	-- 1A	--	95 0	
07/09/85 1430	5050 5050		5.25 83	9.9 113	73.4F 23.0C	8.4	269	--	--	--	--	--	--	--	--	--	--	
08/12/85 1445	5050 5050		4.44 35	9.6 125	59.9F 15.5C	8.4	289	--	--	--	--	--	--	--	--	--	172	

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G-W Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	8	F	TDS SUM	TH MCM		SAR 45AR
F3 L 156.0 223.3 COPCO LK NR COPCO						F05C7													
05/21/85	5050		13.6	66.9F	8.3	137	10	5.0	12	2.0	--	9.0	3.0	--	2.0	--	46	0.0	
1800	5050		160	19.4C			50	41	52	05		19	08	--	24F	--			
		0					34	28	35	3									S
09/19/85	5050		7.0	56.4F	7.4	200	12	7.0	20	3.1	--	20	4.0	--	3	--	59	0.0	
0845	5050		76	15.2C			80	58	87	08		42	11	--	24F	--			
		3					28	27	41	4									S
F3 R 156.0 226.1 IRONGATE RES NR HOBK BROOK						F05C6													
05/22/85	5050		12.5	67.9F	8.4	131	10	5.0	11	2.0	--	7.0	2.0	--	0	--	46	0.0	
0745	5050		147	19.0C			50	41	48	05		15	06	--	34F	--			
		0					55	28	33	3									S
09/19/85	5050		5.4	62.1F	7.3	207	12	7.0	19	3.0	--	18	4.0	--	1	--	59	0.0	
0715	5050		80	18.7C			80	58	83	08		37	11	--	34F	--			
		0					29	28	40	4									S
F3 1395.00 KLANATH R & KLANATH GLEN						F0541													
12/22/84	5050		8.90	11.1	62.6F	8.1	186	--	--	--	--	--	--	--	--	--			
1555	5050		8850	114	17.0C											64F	--		
12/03/84	5050		15.20	12.2	66.4F	7.4	128	--	--	--	--	--	--	--	--	214F	--		
1335	5050		65900	103	8.0C														
02/05/85	5050		8.83	14.5	63.7F	8.3	157	--	--	--	--	--	--	--	--	34F	--		
1335	5050		9.70		6.5C														
04/15/85	5050		13.59	10.6	54.5F	7.3	119	--	--	--	--	--	--	--	--	104F	--		
1845	5050		33500	99	12.5C														
05/04/85	5050		7.10	10.4	62.6F	7.8	149	--	--	--	--	--	--	--	--	24F	--		
1615	5050		3300	107	17.0C														
08/05/85	5050		6.79	10.1	71.6F	8.4	180	17	8.0	8.0	--	78	--	4.0	--	1	--	76	0.4
1255	5050		3280	115	22.0C	8.2	183	65	68	35	1.56	--	11	--	24	--	0	0.5	S
							46		19										
09/30/85	5050		7.13	11.9	63.5F	8.3	193	--	--	--	--	--	--	--	--	24F	--		
1420	5050		3980	124	17.5C														
F3 1220.01 KLANATH R & ORLEANS						F0542													
10/02/84	5050		1.98	11.1	62.6F	6.2	229	--	--	--	--	--	--	--	--	14F	--		
1345	5050		2650	116	17.0C														
10/02/84	5050		10.3	62.6F	8.1	230	--	--	--	--	--	--	--	--	--	24F	--		
1720	5050		107	17.0C															
10/02/84	5050		9.5	62.6F	8.3	231	--	--	--	--	--	--	--	--	--	24F	--		
2110	5050		99	17.0C															
13/03/84	5050		9.7	59.5F	8.1	233	--	--	--	--	--	--	--	--	--	24F	--		
2640	5050		97	15.3C															
13/03/84	5050		1.97	10.4	60.8F	8.0	231	16	10	18	--	90	--	8.0	--	1	--	81	0.9
1405	5050		2920	106	16.0C	8.0	234	60	82	78	1.80	--	17	--	24F	--	0	1.2	S
								33	34	33									
10/22/84	5050		3.93	11.2	55.4F	8.0	184	13	6.0	14	--	74	--	4.0	--	0	--	66	0.7
1140	5050		5820	107	13.0C	7.8	191	65	66	61	1.48	--	11	--	74	--	0	0.9	S
								34	34	32									
02/26/85	5050		5.43	12.7	66.0F	7.8	148	--	--	--	--	--	--	--	--	34F	--		
1415	5050		8280	108	7.6C														
02/26/85	5050		12.5	65.0F	8.0	152	--	--	--	--	--	--	--	--	--	34F	--		
1750	5050		104	7.2C															
02/26/85	5050		12.1	64.1F	7.8	151	--	--	--	--	--	--	--	--	--	64F	--		
2200	5050		103	8.7C															
02/27/85	5050		10.8	61.0F	7.9	151	--	--	--	--	--	--	--	--	--	44F	--		
0710	5050		85	5.0C															
02/27/85	5050		12.4	63.0F	7.6	151	14	8.0	7.0	--	66	--	2.0	--	0	--	88	0.4	
1900	5050		102	6.1C	6.1	156	70	68	70	10	1.32	--	06	--	24	--	2	0.4	S
							42	40	40	18									
03/05/85	5050		13.8	63.7F	6.8	157	--	--	--	--	--	--	--	--	--	24F	--		
4315	5050		113	6.5C															
04/15/85	5050		9.99	11.2	55.4F	7.5	113	--	--	--	--	--	--	--	--	64F	--		
1415	5050		19000	107	13.0C														
05/13/85	5050		10.0	58.0F	7.7	131	--	--	--	--	--	--	--	--	--	24F	--		
1445	5050		99	14.4C															
05/13/85	5050		10.5	57.0F	8.0	134	--	--	--	--	--	--	--	--	--	24F	--		
1630	5050		102	13.9C															

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. D	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TM MCM		SAR ASAR
F3 1220.01				KLAMATH R & ORLEANS												FG5A2 CONTINUED				
09/13/85	5050		10.6	57.2F	8.2	132	--	--	--	--	--	--	--	--	--	--	--	--		
2140	5050		10.4	14.0C													2AF	--		
09/14/85	5050		10.7	54.0F	7.4	130	--	--	--	--	--	--	--	--	--	--	--	--		
0500	5050		10.1	12.2C													1AF	--		
09/14/85	5050		10.9	55.0F	7.9	126	--	--	--	--	--	--	--	--	--	--	--	--		
0935	5050		10.4	12.8C													2AF	--		
09/14/85	5050		10.9	57.0F	8.0	130	--	--	--	--	--	--	--	--	--	--	--	--		
1305	5050		10.6	13.9C													2AF	--		
09/14/85	5050		10.5	59.4F	8.1	131	--	--	--	--	--	--	--	--	--	--	--	--		
1635	5050		10.5	15.2C													2AF	--		
09/14/85	5050		10.3	57.2F	8.2	128	--	--	--	--	--	--	--	--	--	--	--	--		
2210	5050		10.1	14.0C													2AF	--		
09/15/85	5050		10.3	54.0F	7.7	129	12	5.0	9.0	--	57	--	2.0	--	0	--		54	0.3	
0605	5050		97	12.2C	7.9	126	.80	.49	.22	1.14	--	.06	--	1A	--		0	0.3	\$	
							46	37	17											
09/15/85	5050		10.5	55.0F	7.4	127	--	--	--	--	--	--	--	--	--	--	--	--		
0830	5050		10.0	12.8C													2AF	--		
09/15/85	5050		10.9	57.9F	7.8	127	--	--	--	--	--	--	--	--	--	--	--	--		
1420	5050		10.7	14.4C													2AF	--		
09/04/85	5050	3.59	10.6	60.8F	7.9	149	--	--	--	--	--	--	--	--	--	--	--	--		
1200	5050	9120	10.8	16.0C													1AF	--		
09/12/85	5050		9.5	73.4F	8.4	188	--	--	--	--	--	--	--	--	--	--	--	--		
1400	5050	1600E	112	23.0C													2AF	--		
09/12/85	5050		9.2	71.6F	8.4	188	--	--	--	--	--	--	--	--	--	--	--	--		
1745	5050		10.6	22.0C													3AF	--		
09/12/85	5050		9.3	72.0F	8.3	188	--	--	--	--	--	--	--	--	--	--	--	--		
2010	5050		9.6	22.2C													3AF	--		
09/13/85	5050		8.1	70.0F	7.9	187	--	--	--	--	--	--	--	--	--	--	--	--		
2540	5050		9.1	21.1C													3AF	--		
09/13/85	5050		9.0	70.7F	8.4	185	--	--	--	--	--	--	--	--	--	--	--	--		
0855	5050	1600E	102	21.9C													3AF	--		
09/13/85	5050		9.4	72.5F	8.6	186	--	--	--	--	--	--	--	--	--	--	--	--		
1430	5050		10.9	22.9C													3AF	--		
09/13/85	5050		9.7	72.0F	8.6	186	--	--	--	--	--	--	--	--	--	--	--	--		
1800	5050		112	22.2C													4AF	--		
09/13/85	5050		8.4	71.6F	8.3	185	--	--	--	--	--	--	--	--	--	--	--	--		
2040	5050		9.6	22.0C													3AF	--		
09/14/85	5050		9.2	70.7F	8.2	184	--	--	--	--	--	--	--	--	--	--	--	--		
0505	5050		9.3	21.5C													3AF	--		
09/14/85	5050		8.9	71.6F	8.1	184	18	8.0	12	--	79	--	4.0	--	1	--		70	0.6	
0920	5050	1500E	102	22.0C	8.3	187	.75	.66	.52	1.38	--	.11	--	1A	--		0	0.6	\$	
							39	34	27											
09/14/85	5050		9.6	73.4F	8.3	185	--	--	--	--	--	--	--	--	--	--	--	--		
1315	5050		112	23.0C													3AF	--		
09/30/85	5050		1.28	10.4	62.6F	9.0	206	--	--	--	--	--	--	--	--	--	--	--		
1050	5050	2060	10.8	17.0C													2AF	--		
F3 1302.00				KLAMATH R AN SALMON RIVER												F05A2				
10/02/84	5050		10.2	64.4F	8.2	238	--	--	--	--	--	--	--	--	--	--	--	--		
1255	5050		10.9	16.0C													2AF	--		
10/02/84	5050		10.6	63.5F	8.1	239	--	--	--	--	--	--	--	--	--	--	--	--		
1750	5050		10.6	17.9C													1AF	--		
10/04/84	5050		10.2	61.7F	8.4	239	--	--	--	--	--	--	--	--	--	--	--	--		
2035	5050		10.5	17.9C													2AF	--		
10/03/84	5050		9.9	59.4F	8.1	239	--	--	--	--	--	--	--	--	--	--	--	--		
0540	5050		10.0	17.9C													2AF	--		
10/03/84	5050		10.4	60.8F	7.9	239	15	10	19	--	91	--	6.0	--	0	--		78	0.9	
0930	5050		10.6	17.0C	8.1	243	.75	.82	.83	1.82	--	.17	--	2AF	--		0	1.3	\$	
							31	34	35											

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	D.M. D	DD SAT	TEMP	FIELD LABORATORY PM EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER			
						LABORATORY IN				PERCENT REACTANCE VALUE				PER LITER				PER LITER			
						CA	MG	NA	K	CACDS	SO4	CL	NO3	TURB	SiO2	B	F	TDS	TH	SAP	PL4

F3 1302.00				CLAMATH R AB SALMON RIVER										F0542 CONTINUED							
02/26/85	5050			12.7	45.0F	7.9	160	--	--	--	--	--	--	--	--	--	--	--	--	--	
1315	5050			106	7.2C													3AF	--	--	
02/26/85	5050			12.6	45.0F	7.8	160	--	--	--	--	--	--	--	--	--	--	--	--	--	
1710	5050			106	7.2C													3AF	--	--	
02/26/85	5050			12.5	44.1F	8.0	164	--	--	--	--	--	--	--	--	--	--	--	--	--	
2120	5050			103	6.7C													1AF	--	--	
02/27/85	5050			12.0	39.0F	8.1	157	--	--	--	--	--	--	--	--	--	--	--	--	--	
0540	5050			92	3.9C													4AF	--	--	
02/27/85	5050			12.6	43.0F	7.7	155	--	--	--	--	--	--	--	--	--	--	--	--	--	
0330	5050			103	6.1C													4AF	--	--	
05/13/85	5050			10.5	50.0F	7.8	147	--	--	--	--	--	--	--	--	--	--	--	--	--	
1400	5050			104	14.4C													2AF	--	--	
05/13/85	5050			10.7	50.0F	8.1	146	--	--	--	--	--	--	--	--	--	--	--	--	--	
1800	5050			107	15.0C													2AF	--	--	
05/14/85	5050			10.6	55.0F	7.8	148	--	--	--	--	--	--	--	--	--	--	--	--	--	
0430	5050			101	12.8C													1AF	--	--	
05/14/85	5050			10.9	46.0F	7.9	149	--	--	--	--	--	--	--	--	--	--	--	--	--	
0850	5050			105	13.3C													2AF	--	--	
05/14/85	5050			10.6	98.0F	8.1	145	--	--	--	--	--	--	--	--	--	--	--	--	--	
1210	5050			105	14.4C													2AF	--	--	
05/14/85	5050			10.5	60.8F	8.1	142	--	--	--	--	--	--	--	--	--	--	--	--	--	
1605	5050			107	16.0C													2AF	--	--	
05/14/85	5050			10.5	58.1F	8.1	146	--	--	--	--	--	--	--	--	--	--	--	--	--	
2115	5050			104	14.5C													2AF	--	--	
05/15/85	5050			10.7	55.0F	7.9	143	12	6.0	67	--	2.0	--	--	--	--	--	0.0	--	--	
0515	5050			102	12.8C	6.6	149	+00	+06	1.34	--	+00	--	--	--	--	--	1A	--	0.3	
						39	43		26	17									0	0.4	
05/15/85	5050			10.5	56.0F	7.6	143	--	--	--	--	--	--	--	--	--	--	--	--	--	
0600	5050			102	13.3C													2AF	--	--	
05/15/85	5050			10.6	62.8F	8.0	145	--	--	--	--	--	--	--	--	--	--	--	--	--	
1340	5050			111	17.0C													2AF	--	--	
05/12/85	5050			9.2	73.4F	8.1	208	--	--	--	--	--	--	--	--	--	--	--	--	--	
1300	5050			105	23.0C													3AF	--	--	
08/12/85	5050			8.8	75.2F	8.5	184	--	--	--	--	--	--	--	--	--	--	--	--	--	
1700	5050			105	24.0C													3AF	--	--	
08/12/85	5050			8.5	73.0F	8.3	190	--	--	--	--	--	--	--	--	--	--	--	--	--	
1930	5050			99	22.6C													3AF	--	--	
05/13/85	5050			8.6	70.0F	8.2	192	--	--	--	--	--	--	--	--	--	--	--	--	--	
0500	5050			97	21.1C													3AF	--	--	
08/13/85	5050			9.4	69.8F	8.0	193	--	--	--	--	--	--	--	--	--	--	--	--	--	
0325	5050			104	21.0C													3AF	--	--	
08/13/85	5050				72.5F	8.5	204	--	--	--	--	--	--	--	--	--	--	--	--	--	
1310	5050				22.5C													3AF	--	--	
08/13/85	5050			9.3	73.9F	8.7	196	--	--	--	--	--	--	--	--	--	--	--	--	--	
1640	5050			110	23.3C													3AF	--	--	
08/13/85	5050			8.7	72.5F	5.3	190	--	--	--	--	--	--	--	--	--	--	--	--	--	
2010	5050			101	22.5C													3AF	--	--	
05/14/85	5050			8.4	71.6F	8.2	194	--	--	--	--	--	--	--	--	--	--	--	--	--	
0430	5050			103	22.0C													4AF	--	--	
08/14/85	5050			9.2	70.7F	8.0	194	--	--	--	--	--	--	--	--	--	--	--	--	--	
0835	5050			105	21.5C													4AF	--	--	
05/14/85	5050			9.0	72.5F	8.3	197	--	--	--	--	--	--	--	--	--	--	--	--	--	
1240	5050			105	22.5C													5AF	--	--	
08/20/85	5050			9.3	70.7F	8.5	196	--	--	--	--	--	--	--	--	--	--	--	--	--	
1315	5050			105	21.5C													3AF	--	--	

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. D	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REY			
						CA	MG	NA	K	CA CACO3	SO4	CL	NO3	B TURB	F SIO2	TDS SUN	TH MCH		SAR ASAR		
F3 1327-00			KLAMATH R AB TI CREEK										F05C1								
10/02/84 1220	5050 5050		11.6 123	63.5F 17.5C	0.2 241	--	--	--	--	--	--	--	--	--	--	1AF	--				
10/02/84 1625	5050 5050		11.4 119	61.7F 16.5C	0.1 240	--	--	--	--	--	--	--	--	--	--	1AF	--				
10/02/84 2005	5050 5050		9.6 99	60.8F 16.0C	0.2 242	--	--	--	--	--	--	--	--	--	--	2AF	--				
10/03/84 0500	5050 5050		8.9 90	59.0F 15.0C	0.3 242	--	--	--	--	--	--	--	--	--	--	3AF	--				
10/03/84 0900	5050 5050		10.5 107	59.9F 15.5C	0.2 245	16 +80 32	10 .82 33	20 .87 35	--	92 1.84	--	6.0 .17	--	.1	--	2AF	--	81 0	1.0 1.4		5
02/26/85 1250	5050 5050		12.9 108	44.1F 6.7C	0.0 157	--	--	--	--	--	--	--	--	--	--	3AF	--				
02/26/85 1640	5050 5050		12.5 104	44.1F 6.7C	7.8 161	--	--	--	--	--	--	--	--	--	--	3AF	--				
02/26/85 2100	5050 5050		11.6 95	43.0F 6.1C	8.0 161	--	--	--	--	--	--	--	--	--	--	4AF	--				
02/27/85 0605	5050 5050		11.8 93	39.9F 4.4C	8.0 158	--	--	--	--	--	--	--	--	--	--	6AF	--				
02/27/85 0900	5050 5050		12.1 98	42.0F 5.6C	7.5 172	164 172	15 .75 38	10 .82 42	9.0 .39 20	--	73 1.46	--	3.0 .08	--	.0	2A	--	78 6	0.4 0.6		5
03/05/85 1420	5050 5050		13.0 107	42.8F 6.0C	0.8 174	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/13/85 1330	5050 5050		10.2 102	58.0F 14.4C	8.0 149	--	--	--	--	--	--	--	--	--	--	3AF	--				
05/13/85 1525	5050 5050		10.8 108	58.0F 14.4C	8.2 148	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/13/85 2000	5050 5050		10.3 102	57.2F 14.0C	8.2 150	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 0400	5050 5050		9.8 93	54.0F 12.2C	7.6 151	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 0720	5050 5050		10.5 102	56.0F 13.3C	8.0 149	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 1145	5050 5050		10.5 104	57.0F 13.9C	8.1 147	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 1530	5050 5050		10.6 107	59.0F 15.0C	8.2 145	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 2030	5050 5050		9.8 96	56.3F 13.5C	8.2 148	--	--	--	--	--	--	--	--	--	--	2AF	--				
05/15/85 0445	5050 5050		10.0 97	56.0F 13.3C	8.0 149	13 .65 41	8.0 .20 42	6.0 .26 17	--	67 1.34	--	2.0 .06	--	.0	1A	--	86 0	0.3 0.4		5	
05/15/85 0650	5050 5050		9.9 95	55.0F 12.8C	7.6 145	--	--	--	--	--	--	--	--	--	--	2AF	--				5
05/15/85 1305	5050 5050		10.6 108	59.9F 15.5C	8.1 144	--	--	--	--	--	--	--	--	--	--	2AF	--				5
08/12/85 1230	5050 5050		9.3 110	73.4F 23.0C	8.2 197	--	--	--	--	--	--	--	--	--	--	3AF	--				5
08/12/85 1615	5050 5050		9.6 114	73.4F 23.0C	8.6 195	--	--	--	--	--	--	--	--	--	--	3AF	--				5
08/12/85 1905	5050 5050		8.4 98	72.5F 22.5C	8.3 194	--	--	--	--	--	--	--	--	--	--	4AF	--				5
08/13/85 0430	5050 5050		7.8 88	64.1F 20.6C	8.2 194	--	--	--	--	--	--	--	--	--	--	3AF	--				5
08/13/85 0830	5050 5050		8.5 96	66.9F 20.5C	8.1 194	--	--	--	--	--	--	--	--	--	--	5AF	--				5

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. O	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				TDS SUM	TH NCM	SAR ASAR	RE*
						CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	SiO2						
F3 1327.00			KLAMATH R AB TI CREEK				F05C1 CONTINUED														
08/13/85 1220	5050 5050		9.1 108	73.4F 23.0C	8.7	195	--	--	--	--	--	--	--	--	--	--	3AF	--			
08/13/85 1600	5050 5050		10.1 121	75.0F 23.9C	8.6	195	--	--	--	--	--	--	--	--	--	--	3AF	--			
08/13/85 1930	5050 5050		8.5 100	72.5F 22.5C	8.1	194	--	--	--	--	--	--	--	--	--	--	3AF	--			
08/14/85 0400	5050 5050		8.2 93	69.8F 21.0C	8.2	199	--	--	--	--	--	--	--	--	--	--	7AF	--			
08/14/85 0805	5050 5050		6.5 97	69.0F 21.0C	8.2	196 199	14 +70	9.0 .74	13 .57	-- 28	83 1.66	--	5.0 .14	--	.1 2A	--			72 0	0.7 0.9	
08/14/85 1210	5050 5050		9.7 116	74.3F 23.5C	8.5	200	--	--	--	--	--	--	--	--	--	--	7AF	--			
08/20/85 1230	5050 5050		9.5 109	70.7F 21.5C	8.5	189	--	--	--	--	--	--	--	--	--	--	3AF	--			
F3 1330.00			KLAMATH R AB DILLON C				F05C1														
10/02/84 1150	5050 5050		10.8 114	62.6F 17.0C	6.1	247	--	--	--	--	--	--	--	--	--	--	1AF	--			
10/02/84 1600	5050 5050		10.4 110	62.6F 17.0C	6.0	248	--	--	--	--	--	--	--	--	--	--	1AF	--			
10/02/84 1940	5050 5050		10.0 103	60.8F 16.0C	6.0	245	--	--	--	--	--	--	--	--	--	--	2AF	--			
10/03/84 0420	5050 5050		9.5 97	59.9F 15.5C	6.3	246	--	--	--	--	--	--	--	--	--	--	3AF	--			
10/03/84 0835	5050 5050		9.8 99	59.4F 15.2C	6.0	246	--	--	--	--	--	--	--	--	--	--	2AF	--			
02/26/85 1210	5050 5050		12.8 107	44.1F 6.7C	7.8	176	--	--	--	--	--	--	--	--	--	--	4AF	--			
02/26/85 1610	5050 5050		9.9 83	44.1F 6.7C	7.7	175	--	--	--	--	--	--	--	--	--	--	4AF	--			
02/26/85 2040	5050 5050		11.8 97	43.0F 6.1C	8.0	173	--	--	--	--	--	--	--	--	--	--	4AF	--			
02/27/85 0515	5050 5050		12.2 96	39.9F 4.4C	8.1	167	--	--	--	--	--	--	--	--	--	--	4AF	--			
02/27/85 0845	5050 5050		12.1 99	43.0F 6.1C	7.6 8.1	181 181	14 .70	9.0 .74	9.0 .39	-- 21	76 1.52	--	3.0 .08	--	.0 6A	--			72 0	0.5 0.6	
05/13/85 1245	5050 5050		10.4 101	56.0F 13.3C	7.9	193	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 1910	5050 5050		10.3 103	58.0F 14.4C	8.2	192	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 1925	5050 5050		10.1 102	59.0F 15.0C	8.1	193	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0340	5050 5050		10.0 97	56.0F 13.3C	8.1	194	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0750	5050 5050		10.0 97	56.0F 13.3C	8.1	192	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1125	5050 5050		9.9 99	58.0F 14.4C	8.2	190	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1510	5050 5050		10.5 108	60.8F 16.0C	8.1	191	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1955	5050 5050		9.9 94	56.1F 14.5C	8.3	192	--	--	--	--	--	--	--	--	--	--	2AF	--			
05/15/85 0400	5050 5050		10.7 103	55.0F 12.8C	8.2 8.0	148 192	13 .65	6.0 .66	7.0 .30	-- 19	69 1.38	--	3.0 .08	--	.0 1A	--			66 0	0.4 0.5	
05/15/85 0630	5050 5050		9.8 96	56.0F 13.3C	7.8	149	--	--	--	--	--	--	--	--	--	--	2AF	--			

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. S	DO SAT	TEMP	FIELD LABORATORY PM EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER PERCENT REACTANCE VALUE					REY
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TOS SUM	TH NCH	SAR ASAR			

F3 1330.00 KLA*ATH # 48 OILLON C F05C1 CONTINUEO																					
05/15/85	5050		10.3	60.8F	8.0	149	--	--	--	--	--	--	--	--	--	--	--	--	--		
1240	5050		106	16.0C															24F	--	
08/12/85	5050		9.5	75.2F	8.3	192	--	--	--	--	--	--	--	--	--	--	--	--	--		
1210	5050		115	24.0C															3AF	--	
08/12/85	5050		9.5	73.4F	8.4	196	--	--	--	--	--	--	--	--	--	--	--	--	--		
1530	5050		114	23.0C															3AF	--	
08/12/85	5050		8.7	72.5F	8.3	196	--	--	--	--	--	--	--	--	--	--	--	--	--		
1845	5050		102	22.5C															3AF	--	
08/13/85	5050		7.9	69.1F	8.2	196	--	--	--	--	--	--	--	--	--	--	--	--	--		
0410	5050		89	20.6C															3AF	--	
09/13/85	5050		8.4	70.7F	8.0	195	--	--	--	--	--	--	--	--	--	--	--	--	--		
0730	5050		97	21.5C															3AF	--	
09/13/85	5050		9.1	73.4F	8.6	197	--	--	--	--	--	--	--	--	--	--	--	--	--		
1150	5050		108	23.0C															3AF	--	
08/13/85	5050		9.5	74.3F	8.6	196	--	--	--	--	--	--	--	--	--	--	--	--	--		
1520	5050		113	23.5C															3AF	--	
08/13/85	5050		8.8	74.3F	8.1	199	--	--	--	--	--	--	--	--	--	--	--	--	--		
1920	5050		105	23.5C															3AF	--	
09/14/85	5050		8.1	69.0F	8.4	200	--	--	--	--	--	--	--	--	--	--	--	--	--		
0340	5050		92	21.0C															6AF	--	
08/14/85	5050		8.1	70.7F	8.2	198	--	--	--	--	--	--	--	--	--	--	--	--	--		
0735	5050		93	21.5C															6AF	--	
08/14/85	5050		9.5	76.1F	8.5	198	--	--	--	--	--	--	--	--	--	--	--	--	--		
1145	5050		118	24.5C															7AF	--	
08/20/85	5050		9.0	67.1F	8.5	191	--	--	--	--	--	--	--	--	--	--	--	--	--		
1145	5050		100	19.5C															3AF	--	

F3 1333.00 KLA*ATH R 48 INDEPENDENCE CREEK F05C1																					
10/01/84	5050		10.5	59.9F	8.1	248	--	--	--	--	--	--	--	--	--	--	--	--	--		
1315	5050		109	15.5C															24F	--	
10/21/84	5050		10.1	59.9F	8.1	247	--	--	--	--	--	--	--	--	--	--	--	--	--		
1715	5050		104	15.5C															24F	--	
10/01/84	5050		9.7	61.3F	8.3	248	--	--	--	--	--	--	--	--	--	--	--	--	--		
2155	5050		101	16.3C															24F	--	
10/02/84	5050		9.5	59.0F	8.2	249	--	--	--	--	--	--	--	--	--	--	--	--	--		
0540	5050		98	15.0C															3AF	--	
10/02/84	5050		9.7	59.0F	7.9	248	--	--	--	--	--	--	--	--	--	--	--	--	--		
0835	5050		99	15.0C															24F	--	
10/02/84	5050		10.4	61.5F	8.1	245	--	--	--	--	--	--	--	--	--	--	--	--	--		
1355	5050		110	16.4C															24F	--	
02/25/85	5050		12.3	46.4F	8.0	189	--	--	--	--	--	--	--	--	--	--	--	--	--		
1420	5050		107	8.0C															4AF	--	
02/25/85	5050		12.3	44.1F	8.0	187	--	--	--	--	--	--	--	--	--	--	--	--	--		
2210	5050		103	6.7C															4AF	--	
02/26/85	5050		11.8	41.0F	8.0	188	--	--	--	--	--	--	--	--	--	--	--	--	--		
0645	5050		95	5.0C															4AF	--	
02/26/85	5050		12.4	42.1F	7.9	188	--	--	--	--	--	--	--	--	--	--	--	--	--		
1430	5050		101	5.6C															4AF	--	
02/26/85	5050		12.1	42.0F	8.0	171	15	10	9.0	--	75	--	3.0	--	--	0	--	78	0.4	--	
1445	5050		99	5.4C	8.1	178	.75	.82	.39	1.50	--	.00	--	--	2A	--	4	0.8	--	--	
							38	42	20												
03/25/85	5050		12.7	42.8F	5.9	181	--	--	--	--	--	--	--	--	--	--	--	--	--		
1500	5050		105	6.0C															3AF	--	
05/13/85	5050		10.4	57.3F	8.2	154	--	--	--	--	--	--	--	--	--	--	--	--	--		
1325	5050		107	13.9C															24F	--	
05/13/85	5050		10.3	59.0F	8.4	155	--	--	--	--	--	--	--	--	--	--	--	--	--		
1720	5050		104	15.6C															24F	--	

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. 3	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PILIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				TOS SUM	TN MCM	SAR ASAR	REY
							Ca	Mg	Na	K	CaCO3	SO4	CL	NO3	TURB	SiO2	B	F				
F3 1333.00 Klamath R AB Independence Creek F05C1 CONTINUED																						
05/13/85 2020	5050 5050		13.0 99	57.0F 13.9C	8.2	154	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/14/85 3530	5050 5050		9.2 89	55.0F 12.8C	8.0	151	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/14/85 0940	5050 5050		10.3 100	55.0F 12.8C	8.0	151	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/14/85 1330	5050 5050		10.5 106	58.1F 14.5C	8.2	154	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/14/85 1805	5050 5050		10.4 106	59.0F 15.0C	8.1	151	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/14/85 2050	5050 5050		9.9 99	58.0F 14.4C	8.4 7.9	150 154	12 +60 38	8.0 +56 42	7.0 +30 19	70 1.40	--	3.0 +08	--	--	4.0 14	--	--	--	63 0	0.4 0.5	5	
05/15/85 0600	5050 5050		9.0 87	55.0F 12.8C	7.7	151	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/15/85 1155	5050 5050		10.4 103	57.2F 14.0C	8.0	148	--	--	--	--	--	--	--	--	--	--	24F	--	--			
05/12/85 1740	5050 5050		9.5 112	72.5F 22.5C	8.5	196	--	--	--	--	--	--	--	--	--	--	34F	--	--			
05/12/85 2055	5050 5050		8.1 96	73.0F 22.6C	8.4	196	--	--	--	--	--	--	--	--	--	--	34F	--	--			
08/13/85 0540	5050 5050		8.0 92	69.8F 21.0C	8.2	198	--	--	--	--	--	--	--	--	--	--	44F	--	--			
03/13/85 0940	5050 5050		8.9 104	71.6F 22.0C	8.1	198	--	--	--	--	--	--	--	--	--	--	54F	--	--			
05/13/85 1355	5050 5050		10.0 120	73.9F 23.3C	8.6	193	--	--	--	--	--	--	--	--	--	--	74F	--	--			
05/13/85 1735	5050 5050		9.4 112	73.4F 23.0C	8.7	198	--	--	--	--	--	--	--	--	--	--	84F	--	--			
08/13/85 2135	5050 5050		8.0 96	73.9F 23.3C	8.8	197	--	--	--	--	--	--	--	--	--	--	74F	--	--			
08/14/85 0540	5050 5050		9.4 109	71.1F 21.7C	8.1	197	--	--	--	--	--	--	--	--	--	--	74F	--	--			
03/14/85 1135	5050 5050		9.4 112	73.4F 23.0C	8.3	200	--	--	--	--	--	--	--	--	--	--	74F	--	--			
03/14/85 1400	5050 5050		9.7 117	75.0F 23.9C	6.7	202	--	--	--	--	--	--	--	--	--	--	74F	--	--			
08/15/85 1855	5050 5050		9.8 106	74.3F 23.5C	8.5	199	--	--	--	--	--	--	--	--	--	--	64F	--	--			
03/20/85 1050	5050 5050		9.2 105	69.8F 21.0C	8.4	193	--	--	--	--	--	--	--	--	--	--	34F	--	--			
F3 1336.00 Klamath R 84 Oak Flat Creek F05C1																						
10/01/84 1250	5050 5050		13.7 112	61.5F 16.4C	8.1	248	--	--	--	--	--	--	--	--	--	--	24F	--	--			
10/01/84 1655	5050 5050		10.7 113	62.1F 16.7C	5.3	246	--	--	--	--	--	--	--	--	--	--	24F	--	--			
10/01/84 2120	5050 5050		9.4 103	60.8F 16.0C	8.2	246	--	--	--	--	--	--	--	--	--	--	14F	--	--			
10/02/84 0515	5050 5050		9.2 94	59.0F 15.0C	8.2	245	--	--	--	--	--	--	--	--	--	--	54F	--	--			
10/02/84 2005	5050 5050		9.8 90	56.0F 13.3C	7.4	245	--	--	--	--	--	--	--	--	--	--	44F	--	--			
10/02/84 1335	5050 5050		10.5 108	60.1F 15.6C	8.2	246	--	--	--	--	--	--	--	--	--	--	64F	--	--			
10/03/84 1205	5050 5050		10.2 107	61.7F 16.5C	8.1	248	--	--	--	--	--	--	--	--	--	--	24F	--	--			

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	S.W. D	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER NITRILEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REMARKS	
							CA	MG	NA	K	PERCENT REACTANCE PER LITER			TURB	SI02	F	TDS SUM	TCH NCH		SAR ASAR
											CAC03	SO4	CL							
F3 1336.00 KLAATH 4 AB DAK FLAT CREEK FOSC1 CONTINUED																				
02/25/85 1400	5050 5050		11.7 102	46.4F 8.0C	8.1	188	--	--	--	--	--	--	--	--	4AF	--				
02/25/85 1910	5050 5050		12.1 103	45.0F 7.2C	7.8	180	--	--	--	--	--	--	--	--	4AF	--				
02/25/85 2145	5050 5050		11.9 100	44.1F 6.7C	8.1	195	--	--	--	--	--	--	--	--	4AF	--				
02/26/85 0020	5050 5050		11.8 94	39.9F 4.4C	8.1	182	--	--	--	--	--	--	--	--	5AF	--				
02/26/85 0950	5050 5050		12.3 101	42.1F 5.6C	7.9	181	--	--	--	--	--	--	--	--	5AF	--				
02/26/85 1400	5050 5050		12.7 104	42.0F 5.6C	8.1	188 190	35 .75 37	10 .82 41	10 .44 22	-- 1.80	-- 3.0 .08	-- +1 3A	-- --	-- --	-- --	-- --	78 0	0.5 0.7		
05/13/85 1305	5050 5050		10.6 105	57.0F 13.9C	8.2	162	--	--	--	--	--	--	--	--	2AF	--				
05/13/85 1650	5050 5050		10.5 105	59.0F 15.0C	8.4	162	--	--	--	--	--	--	--	--	2AF	--				
05/13/85 2000	5050 5050		10.2 103	58.0F 14.4C	8.2	161	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 0510	5050 5050		9.9 96	55.0F 12.8C	8.1	158	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 0910	5050 5050		10.1 99	56.0F 13.3C	8.0	158	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 1255	5050 5050		10.5 105	57.2F 14.0C	8.1	157	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 1725	5050 5050		10.7 110	59.9F 15.5C	8.0	158	--	--	--	--	--	--	--	--	2AF	--				
05/14/85 2015	5050 5050		10.0 101	58.0F 14.4C	8.3	159 162	13 .85 39	8.0 .86 40	8.0 .35 21	-- 1.44	-- 3.0 .08	+2 14	-- --	-- --	-- --	-- --	86 0	0.4 0.5		
05/15/85 0920	5050 5050		9.4 95	55.0F 12.8C	7.9	155	--	--	--	--	--	--	--	--	2AF	--				
05/15/85 1125	5050 5050		10.4 104	57.2F 14.0C	8.2	153	--	--	--	--	--	--	--	--	2AF	--				
08/12/85 1710	5050 5050		9.3 113	75.2F 24.0C	8.7	195	--	--	--	--	--	--	--	--	4AF	--				
08/12/85 2140	5050 5050		8.2 98	73.9F 23.3C	8.4	201	--	--	--	--	--	--	--	--	4AF	--				
08/13/85 0515	5050 5050		8.3 95	69.8F 21.0C	8.2	200	--	--	--	--	--	--	--	--	6AF	--				
08/13/85 0905	5050 5050		9.1 109	73.4F 23.0C	8.3	207	--	--	--	--	--	--	--	--	6AF	--				
08/13/85 1325	5050 5050		9.2 109	73.0F 22.9C	8.6	202	--	--	--	--	--	--	--	--	8AF	--				
08/13/85 1705	5050 5050		9.0 110	75.1F 24.5C	8.9	199	--	--	--	--	--	--	--	--	8AF	--				
08/13/85 2110	5050 5050		8.1 98	75.0F 23.9C	9.0	197	--	--	--	--	--	--	--	--	8AF	--				
05/14/85 0930	5050 5050		8.1 93	70.3F 21.1C	7.8	202	--	--	--	--	--	--	--	--	5AF	--				
08/14/85 1040	5050 5050		8.7 102	74.6F 22.0C	8.3	202 206	14 .7C 33	9.0 .74 35	15 .85 21	-- 1.70	-- 5.0 .14	+1 3A	-- --	-- --	-- --	-- --	72 0	0.8 1.0		
08/14/85 1325	5050 5050		9.7 110	73.9F 23.3C	8.6	203	--	--	--	--	--	--	--	--	8AF	--				
08/14/85 1915	5050 5050		8.6 108	77.0F 25.0C	9.5	199	--	--	--	--	--	--	--	--	7AF	--				

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.P. O	DD SAT	TEMP	FIELD LABORATORY #	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REY	
							CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02							
F3 1336.00 KLANATH R AB DAK FLAT CREEK F05C1 CONTINUED																							
06/20/85 1025	5050 5050			8.8 101	8.6 21.0C	193	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F3 1395.00 KLANATH R AB HAPPY CAMP F05C2																							
10/01/84 1205	5050 5050			11.3 120	8.3 19.7C	257	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/01/84 1625	5050 5050			11.0 117	8.3 19.7C	253	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/01/84 2050	5050 5050			9.4 98	8.4 16.0C	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/02/84 0450	5050 5050			8.8 91	8.1 15.6C	252	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/02/84 0820	5050 5050			9.4 95	8.0 15.0C	252	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/02/84 1310	5050 5050			11.8 123	8.3 15.6C	252	16	10	22	--	93	--	6.0	--	--	0	--	--	--	81	1.1	--	--
02/25/85 1300	5050 5050			13.8 121	8.3 8.0C	194	--	--	--	--	--	--	--	--	--	--	--	--	--	0	1.5	--	5
02/25/85 1725	5050 5050			11.9 102	8.0 7.2C	197	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/25/85 2115	5050 5050			11.5 99	7.9 7.2C	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/26/85 0545	5050 5050			11.2 90	8.0 4.7C	194	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/26/85 0920	5050 5050			12.7 105	8.1 5.6C	193	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/26/85 1320	5050 5050			13.1 107	8.2 5.3C	196	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/04/85 0855	5050 5050			13.1 108	8.6 5.5C	204	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/13/85 1150	5050 5050			11.0 117	8.4 19.7C	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/13/85 1600	5050 5050			10.4 111	8.2 15.0C	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/13/85 1930	5050 5050			9.9 103	7.9 15.6C	169	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/85 0440	5050 5050			9.6 95	8.4 13.3C	168	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/85 0930	5050 5050			9.9 100	8.2 14.4C	169	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/85 1215	5050 5050			10.9 112	8.2 15.5C	168	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/85 1640	5050 5050			10.9 113	8.4 16.0C	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/14/85 1940	5050 5050			10.0 103	8.0 15.0C	168	14	8.0	6.0	--	76	--	3.0	--	--	5	--	--	--	68	0.4	--	5
05/15/85 0440	5050 5050			9.9 98	7.9 13.3C	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/15/85 1045	5050 5050			10.9 108	8.4 15.0C	167	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/12/85 1635	5050 5050			11.4 140	8.7 24.0C	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/12/85 2210	5050 5050			9.6 114	8.4 22.2C	206	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/13/85 0440	5050 5050			7.1 82	8.4 21.0C	208	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE C-1 (CONTINUED)

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. D	DD SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
							CA	MG	NA	K	CACOD	SO4	CL	NO3	TURB	SID2	TDS SUN	TH NCH		SAW 45AW
F3		1309.00		KLANATH R AB HAPPY CAMP										F05C2 CONTINUED						
08/13/85 0840	5050 5050		8.8 104	71.6F 22.0C	8.4	208	--	--	--	--	--	--	--	--	--	--	8AF	--		
08/13/85 1240	5050 5050		12.3 124	73.9F 23.3C	8.8	205	--	--	--	--	--	--	--	--	--	--	8AF	--		
08/13/85 1630	5050 5050		10.9 136	77.0F 25.0C	9.0	200	--	--	--	--	--	--	--	--	--	--	8AF	--		
08/13/85 2035	5050 5050		8.2 99	73.9F 23.3C	8.8	203	--	--	--	--	--	--	--	--	--	--	8AF	--		
09/14/85 0500	5050 5050		6.8 80	71.1F 21.7C	8.2	203	--	--	--	--	--	--	--	--	--	--	7AF	--		
09/14/85 0655	5050 5050		9.2 111	73.4F 23.0C	8.3	201	--	--	--	--	--	--	--	--	--	--	8AF	--		
09/14/85 1250	5050 5050		10.2 125	75.0F 23.9C	8.8	202	--	--	--	--	--	--	--	--	--	--	7AF	--		
09/14/85 1725	5050 5050		10.1 126	77.0F 25.0C	8.6	201	--	--	--	--	--	--	--	--	--	--	8AF	--		
09/20/85 0955	5050 5050		8.8 102	69.8F 21.0C	8.5	194	--	--	--	--	--	--	--	--	--	--	3AF	--		
F3		1417.00		THORPSON C HR HAPPY CAMP										F05C2						
10/02/84 1250	5050 5050		10.1 100	56.0F 13.3C	7.8	133	--	--	--	--	--	--	--	--	--	--	2AF	--		
02/26/85 1045	5050 5050		10.3 85	42.0F 5.6C	7.4	87	--	--	--	--	--	--	--	--	--	--	1AF	--		
05/16/85 0900	5050 5050	100E	11.5 105	49.1F 9.5C	7.5 7.8	87 89	7.0 .35	8.0 .49	2.0 .07	.5 .01	.43 .85	1.0 .02	1.0 .03	.00 .00	--	--	50 43	42 0	0.1 0.1	
05/15/85 1410	5050 5050		9.1 104	58.0F 20.0C	8.0	124	--	--	--	--	--	--	--	--	--	--	0AF	--		
F3		1429.00		FT GOFF C NR SEIAO VALLEY										F05C2						
10/02/84 1245	5050 5050	10E	10.1 98	54.0F 12.2C	7.5 8.0	125 122	9.0 .45	9.0 .74	2.0 .09	-- 7	58 1.15	--	1.0 .03	--	--	--	--	0.1 0.1		
02/26/85 1030	5050 5050	15E	11.2 93	42.0F 5.6C	7.3	75	--	--	--	--	--	--	--	--	--	--	5AF	--		
05/16/85 0920	5050 5050	20E	11.1 100	48.2F 9.0C	7.5	78	--	--	--	--	--	--	--	--	--	--	0AF	--		
09/15/85 1420	5050 5050	3E	9.2 102	65.3F 18.5C	7.8	112	--	--	--	--	--	--	--	--	--	--	0AF	--		
F3		1430.00		KLANATH R NR SEIAO VLY										F05C2						
10/01/84 1130	5050 5050		10.5 112	62.1F 16.7C	8.1	256	--	--	--	--	--	--	--	--	--	--	2AF	--		
10/01/84 1600	5050 5050		10.4 111	62.1F 16.7C	8.1	252	--	--	--	--	--	--	--	--	--	--	3AF	--		
10/01/84 2015	5050 5050		9.4 99	60.8F 16.0C	8.1	255	--	--	--	--	--	--	--	--	--	--	2AF	--		
10/02/84 0420	5050 5050		9.5 94	50.1F 15.6C	8.2	255	--	--	--	--	--	--	--	--	--	--	2AF	--		
10/02/84 0755	5050 5050		9.5 97	57.9F 14.4C	8.1	258	--	--	--	--	--	--	--	--	--	--	5AF	--		
10/02/84 1230	5050 5050		10.5 112	62.1F 16.7C	8.1	255	--	--	--	--	--	--	--	--	--	--	4AF	--		
10/03/84 1300	5050 5050	2100	11.1 119	62.1F 16.7C	8.2 8.0	256 256	16 .80	10 .92	22 .96	-- 37	95 1.46	--	6.0 .17	--	--	--	.1 2AF	--		
11/26/84 1435	5050 5050	7222	13.2 108	41.0F 5.0C	7.7	192	--	--	--	--	--	--	--	--	--	--	NAF	--		
12/17/84 1545	5050 5050	5542	14.0 113	40.1F 7.5	7.5 213	213 213	15 .74	9.0 .74	15 .65	-- 35	82 1.64	--	5.0 .14	--	--	--	.0 104	--		

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. J	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REY
						CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH MCH	SAR ASAR		
F3 1430.00						KLAMATH R NR SEIAD VLY				F05C2 CONTINUED										
01/28/85 1405	5050 5050	3450	13.9 110	39.2F 4.0C	7.8 205	--	--	--	--	--	--	--	--	--	--	4AF	--	--		
02/25/85 1230	5050 5050		12.2 105	45.0F 7.2C	8.2 200	--	--	--	--	--	--	--	--	--	--	4AF	--	--		
02/25/85 1650	5050 5050		12.3 105	44.4F 6.9C	8.0 199	--	--	--	--	--	--	--	--	--	--	4AF	--	--		
02/25/85 2025	5050 5050		12.1 104	44.4F 6.9C	8.2 208	--	--	--	--	--	--	--	--	--	--	5AF	--	--		
02/26/85 0515	5050 5050		11.5 92	39.9F 4.4C	8.0 199	--	--	--	--	--	--	--	--	--	--	6AF	--	--		
02/26/85 0855	5050 5050		12.0 99	42.1F 5.6C	7.9 195	--	--	--	--	--	--	--	--	--	--	5AF	--	--		
02/26/85 1255	5050 5050	3730	12.3 100	41.0F 5.0C	8.1 196	--	--	--	--	--	--	--	--	--	--	5AF	--	--		
03/06/85 0945	5050 5050		12.3 102	41.9F 5.5C	8.5 210	--	--	--	--	--	--	--	--	--	--	5AF	--	--		
03/12/85 1530	5050 5050	3650	12.2 109	47.3F 8.5C	8.4 222	--	--	--	--	--	--	--	--	--	--	5AF	--	--		
04/16/85 1340	5050 5050	4980	10.0 98	55.4F 13.0C	7.7 141	--	--	--	--	--	--	--	--	--	--	8AF	--	--		
05/13/85 1125	5050 5050		10.9 110	37.0F 13.9C	8.4 171	--	--	--	--	--	--	--	--	--	--	3AF	--	--		
05/13/85 1530	5050 5050		10.9 114	59.9F 15.5C	8.4 169	--	--	--	--	--	--	--	--	--	--	2AF	--	--		
05/13/85 1905	5050 5050		10.1 104	59.0F 15.0C	8.3 171	--	--	--	--	--	--	--	--	--	--	2AF	--	--		
05/14/85 0415	5050 5050		9.5 93	55.0F 12.8C	8.2 171	--	--	--	--	--	--	--	--	--	--	3AF	--	--		
05/14/85 0800	5050 5050		10.1 99	55.0F 12.6C	7.9 171	--	--	--	--	--	--	--	--	--	--	3AF	--	--		
05/14/85 1140	5050 5050		11.3 113	56.0F 15.0C	9.4 170	--	--	--	--	--	--	--	--	--	--	3AF	--	--		
05/14/85 1500	5050 5050		11.0 110	60.8F 16.0C	8.4 166	--	--	--	--	--	--	--	--	--	--	2AF	--	--		
05/14/85 1910	5050 5050		10.3 103	54.4F 15.0C	8.2 165	14 .73 39	8.0 .66 37	9.0 .39 22	1.3 .03 2	75 1.50 88	6.0 .12 7	3.0 .08 5	.0 .00 0	--	--	112 86	68 0	0.5 0.6	T	
05/15/85 0415	5050 5050		9.6 96	54.0F 13.3C	8.0 170	--	--	--	--	--	--	--	--	--	--	2AF	--	--		
05/15/85 1005	5050 5050		10.7 108	57.2F 14.0C	8.2 168	--	--	--	--	--	--	--	--	--	--	2AF	--	--		
06/13/85 1340	5050 5050	2170	9.9 117	71.6F 22.0C	8.3 169	--	--	--	--	--	--	--	--	--	--	3AF	--	--		
07/04/85 1330	5050 5050	1080	10.1 123	74.3F 23.5C	9.4 181	--	--	--	--	--	--	--	--	--	--	1AF	--	--		
08/12/85 1610	5050 5050		10.3 126	74.3F 23.5C	8.7 207	--	--	--	--	--	--	--	--	--	--	7AF	--	--		
09/12/85 2245	5050 5050		7.6 94	72.0F 22.2C	9.4 204	--	--	--	--	--	--	--	--	--	--	6AF	--	--		
09/13/85 1405	5050 5050		7.5 87	64.9F 21.0C	8.4 207	--	--	--	--	--	--	--	--	--	--	7AF	--	--		
09/13/85 0815	5050 5050		6.7 101	64.9F 21.0C	8.1 203	--	--	--	--	--	--	--	--	--	--	6AF	--	--		
09/13/85 1205	5050 5050		9.7 118	72.5F 22.5C	9.4 205	--	--	--	--	--	--	--	--	--	--	7AF	--	--		

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q	OD SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS		
							CA	MG	NA	K	CAC3	SO4	CL	NO3	TURB	SI02	TOS SUM	TH NCH		SAR ASAR	
F3 1430.00 KLA44TH R NR SEIAD VLY F05C2 CONTINUED																					
09/13/85	5050			8.9	76.1F	0.6	206	--	--	--	--	--	--	--	--	--	--	--	--	--	
1600	5050			111	24.5C													6AF	--		
08/13/85	5050			8.0	73.9F	0.7	201	--	--	--	--	--	--	--	--	--	--	--	--	--	
2000	5050			97	23.3C													6AF	--		
09/14/85	5050			7.5	64.9F	0.0	202	--	--	--	--	--	--	--	--	--	--	--	--	--	
2430	5050			83	18.3C													5AF	--		
09/14/85	5050			9.2	70.7F	7.9	203	14	9.0	15	--	84	--	5.0	--	.1	--			72	0.8
0835	5050			96	21.5C	8.3	206	.70	.74	.05	--	1.08	--	.14	--	3A	--			0	1.0
								33	35	31											
09/14/85	5050			9.5	73.9F	8.3	205	--	--	--	--	--	--	--	--	--	--	--	--	--	
1220	5050			115	23.3C													4AF	--		
09/14/85	5050			9.2	77.0F	8.4	208	--	--	--	--	--	--	--	--	--	--	--	--	--	
1645	5050			115	25.0C													4AF	--		
09/20/85	5050			8.6	68.0F	8.6	198	--	--	--	--	--	--	--	--	--	--	--	--	--	
2920	5050	1190		98	20.0C													3AF	--		
09/10/85	5050			9.4	65.3F	8.1	219	--	--	--	--	--	--	--	--	--	--	--	--	--	
1330	5050	1910		104	18.5C													3AF	--		
F3 1400.00 KLA44TH R A SARAH TOTTEN CAMPGROUND F05C3																					
10/01/84	5050			12.3	60.1F	8.1	253	--	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050			108	15.6C													1AF	--		
10/01/84	5050			10.4	60.1F	8.2	252	--	--	--	--	--	--	--	--	--	--	--	--	--	
1540	5050			109	15.6C													2AF	--		
10/01/84	5050			9.3	62.1F	8.3	253	--	--	--	--	--	--	--	--	--	--	--	--	--	
1945	5050			100	16.7C													2AF	--		
10/02/84	5050			9.0	59.0F	9.1	258	--	--	--	--	--	--	--	--	--	--	--	--	--	
0350	5050			93	15.0C													2AF	--		
10/02/84	5050			9.3	59.0F	8.1	255	--	--	--	--	--	--	--	--	--	--	--	--	--	
0735	5050			93	15.0C													2AF	--		
10/02/84	5050			10.0	60.4F	8.1	257	--	--	--	--	--	--	--	--	--	--	--	--	--	
1130	5050			146	15.8C													2AF	--		
02/25/85	5050			12.2	45.5F	8.1	216	--	--	--	--	--	--	--	--	--	--	--	--	--	
1230	5050			107	7.5C													5AF	--		
02/25/85	5050			12.9	44.1F	8.1	207	--	--	--	--	--	--	--	--	--	--	--	--	--	
1615	5050			111	6.7C													5AF	--		
02/25/85	5050			11.0	44.4F	8.0	219	--	--	--	--	--	--	--	--	--	--	--	--	--	
2000	5050			95	6.4C													6AF	--		
02/26/85	5050			9.4	34.9F	8.1	209	--	--	--	--	--	--	--	--	--	--	--	--	--	
0450	5050			76	4.4C													5AF	--		
02/26/85	5050			11.4	41.0F	7.9	203	--	--	--	--	--	--	--	--	--	--	--	--	--	
0930	5050			98	5.0C													5AF	--		
02/26/85	5050			12.1	41.0F	9.2	205	18	10	13	--	89	--	4.0	--	.1	--			86	0.6
1225	5050			94	5.0C	8.1	217	.40	.82	.57	--	1.78	--	.11	--	.44	--			0	0.9
								39	36	25											
05/13/85	5050			10.5	56.5F	8.4	170	--	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050			106	18.6C													3AF	--		
05/13/85	5050			10.7	60.8F	8.7	166	--	--	--	--	--	--	--	--	--	--	--	--	--	
1510	5050			116	16.3C													2AF	--		
05/13/85	5050			12.1	59.0F	8.1	176	--	--	--	--	--	--	--	--	--	--	--	--	--	
1940	5050			105	15.3C													2AF	--		
05/14/85	5050			9.5	55.0F	8.2	166	--	--	--	--	--	--	--	--	--	--	--	--	--	
0350	5050			94	12.6C													2AF	--		
05/14/85	5050			9.9	54.0F	7.9	164	--	--	--	--	--	--	--	--	--	--	--	--	--	
0730	5050			97	12.2C													1AF	--		
05/14/85	5050			11.1	50.1F	8.4	163	--	--	--	--	--	--	--	--	--	--	--	--	--	
1105	5050			113	14.5C													1AF	--		
05/14/85	5050			11.5	43.3F	8.4	171	--	--	--	--	--	--	--	--	--	--	--	--	--	
1530	5050			127	14.3C													2AF	--		

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							REMARKS	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAP				
F3 1460.00						KLAMATH R A SARAH TOTTEN CAMPGROUND						FJSC3 CONTINUED										
05/14/85	5050		10.0	59.0F	8.2	168	14	8.0	9.0	--	78	--	3.0	--	1.6	--		68	0.5			
1845	5050		104	15.0C	8.3	175	.70	.68	.39	1.96	--	--	.08	--	2A	--		0	0.6			
05/15/85	5050		9.3	54.0F	8.2	168	--	--	--	--	--	--	--	--	--	--						
0345	5050		91	12.2C											2AF	--						
05/15/85	5050		10.6	55.4F	8.2	169	--	--	--	--	--	--	--	--	--	--						
0915	5050		105	13.0C											3AF	--						
08/12/85	5050		10.1	76.1F	8.8	203	--	--	--	--	--	--	--	--	--	--						
1940	5050		126	24.5C											5AF	--						
08/12/85	5050		7.5	72.0F	8.4	210	--	--	--	--	--	--	--	--	--	--						
2310	5050		90	22.2C											5AF	--						
08/13/85	5050		7.6	68.0F	8.3	207	--	--	--	--	--	--	--	--	--	--						
0345	5050		87	20.0C											7AF	--						
08/13/85	5050		9.0	68.0F	8.1	207	--	--	--	--	--	--	--	--	--	--						
0750	5050		103	20.0C											5AF	--						
08/13/85	5050		9.2	71.1F	8.4	206	--	--	--	--	--	--	--	--	--	--						
1135	5050		109	21.7C											6AF	--						
08/13/85	5050		9.1	76.1F	8.8	215	--	--	--	--	--	--	--	--	--	--						
1535	5050		114	24.5C											4AF	--						
08/13/85	5050		8.0	75.0F	8.6	199	--	--	--	--	--	--	--	--	--	--						
1925	5050		99	23.9C											4AF	--						
08/14/85	5050		7.5	69.1F	7.8	203	--	--	--	--	--	--	--	--	--	--						
0400	5050		87	20.6C											4AF	--						
08/14/85	5050		6.1	71.6F	7.9	204	--	--	--	--	--	--	--	--	--	--						
0755	5050		97	22.0C											4AF	--						
08/14/85	5050		9.2	73.0F	8.3	209	--	--	--	--	--	--	--	--	--	--						
1150	5050		111	22.8C											4AF	--						
08/14/85	5050		9.9	77.0F	8.5	216	--	--	--	--	--	--	--	--	--	--						
1615	5050		125	25.0C											4AF	--						
08/20/85	5050		8.5	68.0F	8.6	197	--	--	--	--	--	--	--	--	--	--						
0850	5050		98	20.0C											3AF	--						
F3 1470.00						KLAMATH R A8 HAMBURG RES SITE						FJSC3										
10/23/84	5050		10.1	55.4F	7.5	193	--	--	--	--	--	--	--	--	--	--						
1345	5050		101	13.0C											7AF	--						
11/26/84	5050		12.9	41.0F	7.7	191	--	--	--	--	--	--	--	--	--	--						
1515	5050		106	5.0C											8AF	--						
12/17/84	5050		12.3	39.2F	7.5	209	--	--	--	--	--	--	--	--	--	--						
1625	5050		99	4.0C											8AF	--						
01/08/85	5050		12.6	39.2F	7.9	203	--	--	--	--	--	--	--	--	--	--						
1435	5050		101	4.0C											4AF	--						
02/27/85	5050		12.2	39.2F	7.9	217	--	--	--	--	--	--	--	--	--	--						
1030	5050		98	4.0C											6AF	--						
03/12/85	5050		10.0	46.4F	8.2	225	--	--	--	--	--	--	--	--	--	--						
1605	5050		89	8.0C											6AF	--						
04/16/85	5050		9.8	59.0F	7.6	195	11	6.0	11	--	62	--	2.0	--	.1	--		32	0.7			
1430	5050		102	15.0C	6.8	190	.55	.49	.49	1.24	--	--	.06	--	5A	--		0	0.7			
							36	32	32													
05/08/85	5050		11.2	57.2F	8.3	173	--	--	--	--	--	--	--	--	--	--						
1445	5050		114	14.0C											4AF	--						
06/13/85	5050		9.9	70.7F	8.3	183	--	--	--	--	--	--	--	--	--	--						
1245	5050		146	21.5C											3AF	--						
07/09/85	5050		10.1	73.4F	9.4	215	--	--	--	--	--	--	--	--	--	--						
1255	5050		123	23.0C											1AF	--						
05/20/85	5050		7.9	68.0F	8.6	200	--	--	--	--	--	--	--	--	--	--						
0830	5050		90	20.0C											3AF	--						
07/18/85	5050		7.5	66.4F	8.1	241	--	--	--	--	--	--	--	--	--	--						
1300	5050		105	18.0C											4AF	--						

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	P.W. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REM		
							CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	SI02	F	TDS SUM		TM NCH	SAR ASAR
F3		1575.00	KLAMATH R BELOW SHASTA R										F05C4								
08/20/85 0740	5050 5050		7.9 91	67.1F 19.5C	8.6	195	--	--	--	--	--	--	--	--	--	3AF	--			5	
F3		1585.00	KLAMATH R & R COLLIER REST STOP										F05C5								
09/20/85 0720	5050 5050		7.3 85	67.1F 19.5C	8.6	174	--	--	--	--	--	--	--	--	--	3AF	--			5	
F3		1599.01	KLAMATH R BL IRON GT OM										F05C6								
10/23/84 1245	5050 5050	4320	9.6 95	53.6F 12.0C	7.4	167	--	--	--	--	--	--	--	--	--	7AF	--			5	
11/26/84 1550	5050 5050	5260	12.5 105	41.0F 5.0C	7.3	166	--	--	--	--	--	--	--	--	--	9AF	--			5	
12/18/84 1010	5050 5050	3300	13.4 107	37.4F 3.0C	7.5 7.6	177 176	11 95 32	6.0 4.9 28	16 70 40	-- 1.24	--	4.0 11	--	0 10A	--			52 0	1.0 1.0	5	
01/08/85 1530	5050 5050	2790	13.5 107	37.4F 3.0C	7.4	170	--	--	--	--	--	--	--	--	--	6AF	--			5	
02/25/85 1030	5050 5050	1500	11.3 92	39.2F 4.0C	7.6	166	--	--	--	--	--	--	--	--	--	7AF	--			5	
03/12/85 1220	5050 5050	2310	11.3 100	44.6F 7.0C	7.7	196	--	--	--	--	--	--	--	--	--	6AF	--			5	
04/16/85 1145	5050 5050	4990	9.7 103	59.0F 15.0C	7.6	138	--	--	--	--	--	--	--	--	--	4AF	--			5	
05/08/85 1345	5050 5050	1770	13.5 114	60.8F 16.0C	8.1 8.4	153 150	10 90 35	5.0 4.1 29	12 32	-- 1.20	--	3.0 108	--	2 4A	--			46 0	0.8 0.8	5	
05/13/85 1120	5050 5050	902	10.7 121	64.4F 18.0C	8.4	166	--	--	--	--	--	--	--	--	--	3AF	--			5	
07/09/85 1215	5050 5050	718	10.5 123	68.0F 26.0C	8.4	214	--	--	--	--	--	--	--	--	--	2AF	--			5	
08/20/85 0640	5050 5050		7.5 90	69.6F 21.0C	8.6	170	--	--	--	--	--	--	--	--	--	3AF	--			5	
08/20/85 0655	5050 5050	1010	7.2 86	69.8F 21.0C	8.6	171	--	--	--	--	--	--	--	--	--	3AF	--			5	
09/10/85 1200	5050 5050	1810	7.0 79	64.4F 18.0C	7.8	199	--	--	--	--	--	--	--	--	--	3AF	--			5	
F3		2260.00	OILLON C NR SOMESBAR										F05C1								
10/02/84 1140	5050 5050	24E	10.8 108	58.1F 14.5C	7.7	123	--	--	--	--	--	--	--	--	--	1AF	--			5	
10/22/84 1555	5050 5050		10.5 105	58.1F 14.5C	7.7	121	--	--	--	--	--	--	--	--	--	1AF	--			5	
10/22/84 1940	5050 5050		10.2 99	55.4F 13.0C	7.8	122	--	--	--	--	--	--	--	--	--	1AF	--			5	
10/23/84 0425	5050 5050		10.1 95	53.6F 12.0C	7.7	123	--	--	--	--	--	--	--	--	--	1AF	--			5	
10/23/84 0830	5050 5050	20E	10.6 114	62.6F 17.0C	7.5	123	--	--	--	--	--	--	--	--	--	1AF	--			5	
02/26/85 1215	5050 5050		12.6 102	42.1F 5.6C	7.3	74	--	--	--	--	--	--	--	--	--	2AF	--			5	
02/26/85 1510	5050 5050		12.0 99	43.0F 5.1C	7.2	72	--	--	--	--	--	--	--	--	--	1AF	--			5	
02/26/85 2040	5050 5050		12.2 100	43.0F 5.1C	7.2	71	--	--	--	--	--	--	--	--	--	1AF	--			5	
02/27/85 0425	5050 5050		12.4 99	40.5F 4.7C	7.4	69	--	--	--	--	--	--	--	--	--	1AF	--			5	
02/27/85 0445	5050 5050	175E	12.7 102	41.5F 5.3C	7.2	73	--	--	--	--	--	--	--	--	--	1AF	--			5	
05/13/85 1245	5050 5050		10.7 98	51.1F 10.4C	7.4	74	--	--	--	--	--	--	--	--	--	1AF	--			5	

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	S.A. O	Q3 SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER					REMARKS
					LABORATORY PH	EC	CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH MCM	SAR ASAR			
F3 2260.00 OLLIN C NR SOMESBAR F05C1 CONTINUED																						
05/13/85 1505	5050 5050		10.8 102	53.6F 12.0C	7.7	73	--	--	--	--	--	--	--	--	--	1AF	--					
05/13/85 1930	5050 5050		10.9 101	51.8F 11.0C	7.4	72	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 0340	5050 5050		10.8 97	49.0F 7.4C	7.4	75	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 0755	5050 5050		11.0 100	50.0F 10.6C	7.5	72	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 1130	5050 5050		11.4 106	51.8F 11.9C	7.4	71	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 1520	5050 5050		10.6 103	55.8F 13.2C	7.5	71	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 2005	5050 5050		10.5 97	51.8F 11.0C	7.6	70	--	--	--	--	--	--	--	--	--	1AF	--					
05/15/85 0405	5050 5050		11.1 97	47.0F 8.3C	7.6 8.0	75 72	7.0 135 51	3.0 25 36	2.0 25 13	--	32 54	--	1.0 103	--	0 0A	--		30 0	0.2 0.1			
05/15/85 0630	5050 5050		10.0 87	47.0F 8.3C	7.6	72	--	--	--	--	--	--	--	--	--	1AF	--					
05/15/85 1245	5050 5050		11.0 104	53.6F 12.0C	7.4	73	--	--	--	--	--	--	--	--	--	1AF	--					
05/12/85 1200	5050 5050		9.7 108	67.1F 14.5C	9.4	115	--	--	--	--	--	--	--	--	--	1AF	--					
08/12/85 1540	5050 5050		8.9 102	69.8F 21.0C	7.8	117	--	--	--	--	--	--	--	--	--	1AF	--					
08/12/85 1840	5050 5050		8.7 98	66.0F 20.0C	7.8	114	--	--	--	--	--	--	--	--	--	1AF	--					
05/13/85 0400	5050 5050		8.9 94	63.0F 17.2C	7.6	116	--	--	--	--	--	--	--	--	--	1AF	--					
05/13/85 0740	5050 5050		9.7 103	63.5F 17.5C	7.6	120	--	--	--	--	--	--	--	--	--	2AF	--					
05/13/85 1140	5050 5050		9.4 103	65.2F 14.0C	7.9	119	--	--	--	--	--	--	--	--	--	1AF	--					
05/13/85 1510	5050 5050		9.4 104	71.6F 22.0C	8.3	118	--	--	--	--	--	--	--	--	--	1AF	--					
05/13/85 1915	5050 5050		9.4 105	68.0F 20.0C	7.6	116	--	--	--	--	--	--	--	--	--	1AF	--					
08/14/85 0335	5050 5050		9.0 97	64.4F 18.0C	7.6	117	--	--	--	--	--	--	--	--	--	1AF	--					
05/14/85 0740	5050 5050		9.5 108	68.9F 20.5C	7.7 8.2	117 114	13 165 57	5.0 41 36	2.0 19 8	--	50 1.00	--	1.0 103	--	0 0A	--		53 3	0.1 0.1			
05/14/85 1135	5050 5050		9.4 106	63.9F 20.5C	7.9	117	--	--	--	--	--	--	--	--	--	1AF	--					
F3 2264.00 AURLEY C NR SOMESBAR F05C1																						
05/15/85 1125	5050 5050	31	9.7 100	60.8F 16.0C	7.5 8.2	110 112	13 165 81	3.0 25 23	4.0 17 16	--	45 90	--	1.0 103	--	1 0A	--		45 0	0.3 0.2			
F3 2265.30 ELLIOT C NR SOMESBAR F05C1																						
05/15/85 1140	5050 5050	2E	9.5 97	59.3F 15.0C	7.4 8.1	89 91	10 150 57	3.0 25 28	3.0 13 15	--	36 76	--	1.0 103	--	1 0A	--		36 0	0.2 0.2			

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q	OD SAT	TEMP	FIELD		MINERAL	CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				RE4
					LABORATORY PH	EC		CA	MG	NA	K	CACO3	SO4	CL	NO3	8 TURB	105 SIO2	105 SUM	1M NCM	
F3 2270.00		SWILLUP C NR SOMESBAR										F05C1								
05/15/85 1550	5050 5050		11.0 105	59.6F 12.0C	7.4 105	--	--	--	--	--	--	--	--	--	04F	--				
08/15/85 1150	5050 5050	4E	9.8 102	60.8F 16.0C	7.5 138	13 .65 45	8.0 .66 46	3.0 .13 9	--	59 1.18	--	1.0 .03	--	.1 0A	--		66 7	0.2 0.2		
F3 2299.00		INDIAN C NR HAPPY CAMP										F05C2								
10/02/84 1750	5050 5050		9.4 99	60.8F 16.0C	7.8 172	--	--	--	--	--	--	--	--	3AF	--					
02/26/85 1305	5050 5050	16DE	11.2 92	42.0F 5.0C	7.3 112	--	--	--	--	--	--	--	--	1AF	--					
F3 2303.00		INDIAN C BL MILLPOND										F05C2								
03/06/85 0835	5050 5050		13.0 103	39.2F 4.0C	8.4 122	--	--	--	--	--	--	--	--	1AF	--					
F3 2304.00		INDIAN C EF A MO										F05C2								
10/02/84 1555	5050 5050	6E	10.3 102	55.4F 13.0C	7.6 123	--	--	--	--	--	--	--	--	1AF	--					
02/26/85 1245	5050 5050	30E	11.2 92	41.0F 5.0C	7.4 91	--	--	--	--	--	--	--	--	1AF	--					
F3 2305.00		INDIAN C A SF INDIAN C BR										F05C2								
10/02/84 1730	5050 5050		9.5 95	56.3F 13.3C	7.5 171	--	--	--	--	--	--	--	--	1AF	--					
02/26/85 1225	5050 5050	40E	10.9 91	42.0F 5.0C	7.5 123	--	--	--	--	--	--	--	--	1AF	--					
F3 2308.00		INDIAN C SF A BR										F05C2								
10/02/84 1700	5050 5050		9.7 101	59.0F 15.0C	7.8 166	--	--	--	--	--	--	--	--	1AF	--					
02/26/85 1210	5050 5050		11.0 91	41.0F 5.0C	7.4 97	--	--	--	--	--	--	--	--	1AF	--					
03/06/85 0830	5050 5050		12.6 100	36.3F 3.5C	8.4 93	--	--	--	--	--	--	--	--	1AF	--					
F3 2315.00		CLEAR C NR HAPPY CAMP										F05C1								
10/01/84 1300	5050 5050		10.8 108	57.2F 14.0C	7.9 133	--	--	--	--	--	--	--	--	1AF	--					
10/01/84 1705	5050 5050		10.3 101	55.9F 13.3C	7.9 133	--	--	--	--	--	--	--	--	1AF	--					
10/01/84 2140	5050 5050		10.1 99	55.4F 13.0C	8.0 133	--	--	--	--	--	--	--	--	1AF	--					
10/02/84 0530	5050 5050		10.2 95	52.0F 11.1C	7.8 133	--	--	--	--	--	--	--	--	1AF	--					
10/02/84 0920	5050 5050		10.8 102	53.1F 11.7C	7.7 134	--	--	--	--	--	--	--	--	1AF	--					
10/02/84 1345	5050 5050	45E	10.8 106	55.9F 13.3C	7.9 133	--	--	--	--	--	--	--	--	2AF	--					
02/25/85 1410	5050 5050		12.8 106	42.8F 6.0C	7.5 79	--	--	--	--	--	--	--	--	1AF	--					
02/25/85 1640	5050 5050		12.1 93	42.1F 5.0C	7.6 77	--	--	--	--	--	--	--	--	1AF	--					
02/25/85 2155	5050 5050		12.2 100	42.1F 5.0C	7.5 61	--	--	--	--	--	--	--	--	2AF	--					
02/26/85 0630	5050 5050		12.0 94	39.0F 3.9C	7.6 78	--	--	--	--	--	--	--	--	1AF	--					
02/26/85 1005	5050 5050		12.3 98	39.9F 4.4C	7.4 79	--	--	--	--	--	--	--	--	1AF	--					
02/26/85 1415	5050 5050		11.8 94	39.9F 4.4C	7.5 61	--	--	--	--	--	--	--	--	1AF	--					

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

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TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.P. Q	DC SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS
						CA	MG	NA	K	CaCO3	SO4	CL	NO3	TDS SUM	TH MCH	SAR	ASAR	
F3 2329.00																		
INDIAN C AT MOUTH																		
F05C2																		
10/01/84	5050			10.7	57.9F	7.9	170	--	--	--	--	--	--	--	--	--	--	
1235	5050	25E		105	14.4C									24F	--	--		
10/01/84	5050			12.0	57.9F	8.6	170	--	--	--	--	--	--	--	--	--	--	
1640	5050			101	14.4C									24F	--	--		
10/01/84	5050			9.8	57.2F	9.1	170	--	--	--	--	--	--	--	--	--	--	
2100	5050			98	14.0C									24F	--	--		
10/02/84	5050			8.9	55.4F	7.8	170	--	--	--	--	--	--	--	--	--	--	
0500	5050			87	13.0C									44F	--	--		
10/02/84	5050			9.4	54.0F	7.7	170	--	--	--	--	--	--	--	--	--	--	
0845	5050			91	12.2C									44F	--	--		
10/02/84	5050			10.3	55.9F	7.9	170	--	--	--	--	--	--	--	--	--	--	
1320	5050			102	13.3C									44F	--	--		
10/03/84	5050			10.7	59.0F	8.6	170	--	--	--	--	--	--	--	--	--	--	
1225	5050	25E		110	15.0C									24F	--	--		
02/25/85	5050			12.6	46.4F	8.1	111	--	--	--	--	--	--	--	--	--	--	
1345	5050			110	8.0C									14F	--	--		
02/25/85	5050			11.8	42.1F	7.5	110	--	--	--	--	--	--	--	--	--	--	
1750	5050			96	5.6C									14F	--	--		
02/25/85	5050			12.0	42.1F	7.6	114	--	--	--	--	--	--	--	--	--	--	
2125	5050			99	5.6C									14F	--	--		
02/26/85	5050			12.4	38.5F	7.8	110	--	--	--	--	--	--	--	--	--	--	
0605	5050			97	3.6C									24F	--	--		
02/26/85	5050			13.0	39.9F	7.7	110	--	--	--	--	--	--	--	--	--	--	
0935	5050			104	4.4C									34F	--	--		
02/26/85	5050			13.3	43.5F	8.1	112	9.2	8.0	2.0	--	52	--	1.0	--	4C	--	58 0.1
1335	5050			105	4.7C	8.0	113	45	46	409	--	1.04	--	.03	--	1A	--	4 0.1
								38	55	8								5
05/05/85	5050			12.3	41.9F	6.8	117	--	--	--	--	--	--	--	--	--	--	
1530	5050			101	5.5C									14F	--	--		
05/13/85	5050			11.0	53.0F	7.9	104	--	--	--	--	--	--	--	--	--	--	
1250	5050			105	11.7C									14F	--	--		
05/13/85	5050			10.4	55.4F	7.8	108	--	--	--	--	--	--	--	--	--	--	
1625	5050			102	13.0C									14F	--	--		
05/13/85	5050			10.1	54.0F	7.8	107	--	--	--	--	--	--	--	--	--	--	
1940	5050			98	12.2C									14F	--	--		
05/14/85	5050			11.2	47.0F	7.5	104	--	--	--	--	--	--	--	--	--	--	
0500	5050			99	8.3C									14F	--	--		
05/14/85	5050			11.6	47.0F	7.5	103	--	--	--	--	--	--	--	--	--	--	
0855	5050			102	8.3C									14F	--	--		
05/14/85	5050			11.1	52.7F	7.8	103	--	--	--	--	--	--	--	--	--	--	
1235	5050			105	11.5C									14F	--	--		
05/14/85	5050			10.7	55.4F	7.8	104	--	--	--	--	--	--	--	--	--	--	
1700	5050			105	13.0C									14F	--	--		
05/14/85	5050			10.0	54.0F	7.8	102	9.0	8.0	2.0	--	49	--	1.0	--	.2	--	47 0.1
2000	5050			97	12.2C	8.2	106	45	49	409	--	.98	--	.03	--	0A	--	9 0.1
								44	48	9								5
05/15/85	5050			10.4	47.0F	7.3	104	--	--	--	--	--	--	--	--	--	--	
2505	5050			92	8.3C									24F	--	--		
05/15/85	5050			11.4	50.0F	7.5	102	--	--	--	--	--	--	--	--	--	--	
1105	5050			105	10.0C									14F	--	--		
05/12/85	5050			9.2	60.9F	8.3	163	--	--	--	--	--	--	--	--	--	--	
1850	5050			105	20.5C									24F	--	--		
05/12/85	5050			9.2	56.4F	8.2	163	--	--	--	--	--	--	--	--	--	--	
2200	5050			92	19.4C									24F	--	--		
05/13/85	5050			8.4	64.4F	7.8	165	--	--	--	--	--	--	--	--	--	--	
0530	5050			94	14.0C									14F	--	--		

TABLE C-1 (CONTINUED)

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q	OO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				REMARKS		
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				PERCENT REACTANCE VALUE						
											CaCO3	SO4	CL	NO3	CaCO3	SO4	CL	NO3			
F3		2329.00	INDIAN C AT MOUTH				F05C2 CONTINUED														
08/13/85 0855	3050 3050		9.5 108	06.2F 19.0C	7.9	168	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/13/85 1310	3050 3050		9.3 108	70.0F 21.1C	8.3	163	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/13/85 1830	3050 3050		9.0 104	89.8F 21.0C	8.4	163	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/13/85 2050	3050 3050		8.2 93	08.0F 20.0C	8.4	163	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/14/85 0510	3050 3050		8.9 94	06.0F 18.9C	7.3	164	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/14/85 1010	3050 3050		9.8 108	87.1F 19.3C	8.1	163	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/14/85 1305	3050 3050		9.2 108	71.1F 21.7C	8.3	163	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/14/85 1750	3050 3050		8.8 102	89.8F 21.0C	8.0	167	--	--	--	--	--	--	--	--	--	--	--	--	--		
F3		2355.00	PORTUGUESE C NR SEIAD VALLEY				F05C2														
02/28/85 1015	3050 3050		11.1 19E	41.0F 5.0C	7.3	80	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/15/85 1435	3050 3050		9.2 101	64.4F 18.0C	7.7 8.3	125 131	9.0 .45 33	10 1.23 80	2.0 .02 7	--	--	64 1.28	--	1.0 .03	--	--	0 0A	--	--	54 0	0.1 0.1
F3		2365.00	SEIAD C NR SEIAD VALLEY				F05C3														
10/02/84 1215	3050 3050		9.4 5E	82.0F 10.7C	7.1 8.2	197 198	14 .70 33	15 1.23 99	4.0 .17 8	--	--	91 1.82	--	3.0 .08	--	--	1 1A	--	--	96 5	0.2 0.3
02/28/85 1000	3050 3050		10.5 20E	40.3F 4.7C	7.3	112	--	--	--	--	--	--	--	--	--	--	--	--	--		
08/15/85 0940	3050 3050		10.4 10E	53.8F 12.0C	7.4 7.8	107 108	7.0 .33 34	8.0 12.0C 69	.0 .00 0	.3 .01 1	--	91 1.02 94	2.0 .04 4	1.0 .03 3	.0 .00 0	--	0 --	--	71 49	50 0	0.0 0.0
08/15/85 1450	3050 3050		7.9 2E	71.8F 22.0C	7.3	181	--	--	--	--	--	--	--	--	--	--	--	--	--		
F3		4100.00	SALMON R A DOMESEBAR				F05B1														
10/02/84 1315	3050 3050		10.5 108	80.8F 18.0C	8.0	148	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/02/84 1705	3050 3050		15.4 108	81.7F 16.3C	8.0	148	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/02/84 2050	3050 3050		9.7 97	59.0F 13.0C	7.8	147	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/03/84 0955	3050 3050		9.7 94	58.3F 13.3C	7.8	147	--	--	--	--	--	--	--	--	--	--	--	--	--		
10/03/84 0945	3050 3050		1.83 219	10.4 103	87.8F 14.2C	7.7	147	--	--	--	--	--	--	--	--	--	--	--	--		
10/22/84 1205	3050 3050		2.36 424	11.5 104	50.9F 10.3C	7.6 7.9	129 116	15 .75 82	4.0 .33 27	3.0 .13 11	--	49 .98	--	2.0 .06	--	--	0 1A	--	77	54 5	0.2 0.2
02/28/85 1335	3050 3050		4.19 1680	12.4 103	44.1F 6.7C	7.4	98	--	--	--	--	--	--	--	--	--	--	--	--		
02/28/85 1730	3050 3050		12.1 99	43.0F 8.1C	7.3	99	--	--	--	--	--	--	--	--	--	--	--	--	--		
02/28/85 2140	3050 3050		12.1 99	43.0F 6.1C	7.5	102	--	--	--	--	--	--	--	--	--	--	--	--	--		
02/27/85 0655	3050 3050		11.9 93	34.9F 4.4C	7.7	99	--	--	--	--	--	--	--	--	--	--	--	--	--		
02/27/85 0945	3050 3050		12.5 101	42.1F 5.6C	7.3	101	--	--	--	--	--	--	--	--	--	--	--	--	--		
04/15/85 1440	3050 3050		8.21 140	11.8 107	51.8F 11.0C	7.3 6.4	98	7.0 .33 29	2.0 .18 4	1.0 .04 4	--	25 .50	--	1.0 .33	--	--	0 2A	--	42	26 1	0.1 0.0

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	S.W. Q	DO SAT	TEMP	FIELD LABORATORY PH		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REY						
					CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	SIO2	TDS	TN	SR	ASAR							
F3 ~100.00 SALMON R & SONESBAR F0581 CONTINUED																									
25/13/85 1420	5050 5050		10.3 96	53.1F 11.7C	7.4	76	--	--	--	--	--	--	--	--	--	14F	--								
25/13/85 1615	5050 5050		10.0 94	54.0F 12.2C	7.6	78	--	--	--	--	--	--	--	--	--	14F	--								
25/13/85 2110	5050 5050		11.1 104	53.0F 12.0C	7.8	79	--	--	--	--	--	--	--	--	--	14F	--								
25/14/85 0440	5050 5050		11.3 101	52.3F 11.1C	7.2	77	--	--	--	--	--	--	--	--	--	14F	--								
25/14/85 0805	5050 5050		11.0 100	51.1F 10.6C	7.5	78	--	--	--	--	--	--	--	--	--	14F	--								
25/14/85 1225	5050 5050		11.0 104	54.0F 12.2C	7.6	76	--	--	--	--	--	--	--	--	--	14F	--								
25/14/85 1520	5050 5050		10.7 103	55.8F 13.2C	7.5	76	--	--	--	--	--	--	--	--	--	14F	--								
25/14/85 2140	5050 5050		10.9 100	54.5F 12.5C	7.8	75	--	--	--	--	--	--	--	--	--	14F	--								
25/15/85 0535	5050 5050		10.8 97	50.0F 10.0C	7.3	78	9.0 4.5 54	2.0 1.0 23	2.0 1.0 13	--	34 1.68	--	1.0 1.03	--	--	1.0 04	--			30 0	0.2 0.1				S
25/15/85 0810	5050 5050		10.7 96	50.0F 10.0C	7.2	74	--	--	--	--	--	--	--	--	--	14F	--								S
25/15/85 1405	5050 5050		11.0 106	55.4F 13.0C	7.4	75	--	--	--	--	--	--	--	--	--	14F	--								S
25/04/85 1230	5050 5050	3.58 1370	11.0 109	58.1F 14.5C	7.5	80	--	--	--	--	--	--	--	--	--	14F	--								S
26/12/85 1330	5050 5050		9.3 127	71.6F 22.0C	3.2	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/12/85 1720	5050 5050		9.0 127	74.3F 23.5C	3.1	139	--	--	--	--	--	--	--	--	--	14F	--								S
26/12/85 1945	5050 5050		8.6 99	71.1F 21.7C	3.3	136	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 0320	5050 5050		8.7 94	66.0F 18.9C	7.3	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 0840	5050 5050		9.3 101	65.2F 19.0C	7.7	138	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 1330	5050 5050		9.2 106	71.6F 22.0C	8.0	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 1710	5050 5050		9.2 105	73.0F 22.8C	8.1	138	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 2020	5050 5050		9.5 97	70.7F 21.5C	8.2	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/14/85 0450	5050 5050		8.8 96	66.2F 18.0C	7.6	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/14/85 0550	5050 5050	1.74 194	9.3 101	66.2F 19.0C	7.4	138	--	--	--	--	--	--	--	--	--	14F	--								S
26/14/85 1250	5050 5050		9.2 106	71.6F 22.0C	8.1	137	--	--	--	--	--	--	--	--	--	14F	--								S
26/10/85 1.05	5050 5050	1.71 174	10.3 105	67.8F 19.0C	7.6	138	--	--	--	--	--	--	--	--	--	14F	--								S
F3 ~155.00 IAVING C NR SONESBAR F05C1																									
26/13/85 1.45	5050 5050		10.9 96	52.7F 11.5C	7.5	119	--	--	--	--	--	--	--	--	--	14F	--								S
26/13/85 1.45	5050 5050		10.9 104	54.5F 12.5C	7.5	1.4	--	--	--	--	--	--	--	--	--	04F	--								S
26/12/85 1.50	5050 5050	1.72 176	10.2 101	57.2F 14.0C	7.4 8.2	113 115	13 1.65 54	4.0 1.33 29	5.0 1.22 19	--	93 1.68	--	2.0 1.06	--	--	1.0 04	--			49 0	0.3 0.3				S

TABLE C-1 (CONTINUED)
GENERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	DO Q	SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				PE
					LABORATORY PH	EC	CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURB	PO4	SiO2	NO2	ASAR	
F3 4150.00 SANDY BAR C NR SOMESBAR F05C1																				
05/15/85	5050		11.0	51.6F	7.4	81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1515	5050	15E	104	12.0C											DAF	--				
08/15/85	5050		10.1	59.0F	7.5	112	14	4.0	4.0	--	57	--	1.0	--	4	--			52	0.2
1000	5050	4E	102	15.0C	8.2	119	.70	.33	.17		1.14		.03		0A	--			0	0.3
F3 4170.00 TI CREEK NR SOMESBAR F05C1																				
10/03/84	5050		10.9	52.7F	7.6	134	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1100	5050	13E	102	11.5C											14F	--				
02/26/85	5050		9.8	44.0F	7.4	107	14	4.0	4.0	--	51	--	1.0	--	4	--			52	0.2
1550	5050	20E	82	6.7C	5.0	111	.76	.33	.17		1.02		.03		0A	--			1	0.2
03/25/85	5050		12.5	41.0F	6.4	112	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1350	5050		100	5.0C											14F	--				
05/15/85	5050		11.1	52.7F	7.6	112	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1530	5050	10E	104	11.5C											14F	--				
08/15/85	5050		10.1	59.0F	7.8	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1030	5050	6E	102	15.0C											DAF	--				
F3 4190.00 INDEPENDENCE C NR CLEAR CREEK F05C1																				
10/03/84	5050		10.9	52.7F	7.9	173	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1140	5050	10E	103	11.5C											24F	--				
02/26/85	5050		10.5	44.0F	7.5	148	14	5.0	4.0	--	69	--	1.0	--	4	--			68	0.2
1500	5050	30E	88	6.7C	7.9	153	.45	.41	.17		1.38		.03		0A	--			0	0.3
05/16/85	5050		11.5	48.2F	7.6	136	17	4.0	2.0	1.1	64	3.0	1.0	.43	4	--			59	0.1
1745	5050	12E	102	9.0C	7.9	137	.85	.33	.09	.03	1.28	.06	.03	.00					67	0.1
08/15/85	5050		10.0	40.8F	7.9	165	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1220	5050	6E	104	16.0C											DAF	--				
F3 4199.00 ELK C A MD A HAPPY CAMP F05C1																				
10/02/84	5050		11.1	54.7F	8.0	182	20	7.0	6.0	--	78	--	4.0	--	1	--			79	0.3
0950	5050	24E	105	11.5C	8.0	181	1.00	.88	.26		1.56		.11		14F	--			1	0.4
02/26/85	5050		10.5	42.0F	7.5	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1400	5050	100E	86	5.0C											14F	--				
05/16/85	5050		11.5	49.1F	7.6	99	12	4.0	.0	.8	46	2.0	1.0	.1	4	--			46	0.0
0815	5050	100E	104	9.4C	7.8	101	.60	.33	.00	.02	.92	.04	.03	.00					47	0.0
08/13/85	5050		9.2	69.0F	8.1	168	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1335	5050	23E	105	21.0C											DAF	--				
F3 4245.00 GRIDER C NR SEIAD VALLEY F05C3																				
08/15/85	5050		9.1	65.3F	8.1	215	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1535	5050	12E	101	18.5C											DAF	--				
F3 4250.00 WALTER C NR SEIAD VALLEY F05C3																				
02/26/85	5050		10.9	39.0F	7.7	149	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0940	5050	20E	86	3.3C											14F	--				
08/15/85	5050		9.2	62.6F	7.9	185	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1515	5050	5E	100	17.0C											14F	--				
F3 4253.00 DOWELL C AT MOUTH F05C3																				
02/26/85	5050		10.5	39.0F	7.7	154	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0900	5050	10E	83	3.3C											14F	--				
05/16/85	5050		11.0	50.3F	7.9	153	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1030	5050	4E	103	16.5C											DAF	--				
03/15/85	5050		9.1	52.6F	7.8	200	13	1.8	3.0	--	108	--	1.0	--	4	--			107	0.1
1600	5050	4E	99	17.0C	8.5	209	.65	1.48	.13		2.16		.03		0A	--			0	0.2
F3 4244.00 245.9 CLAIR EGGLE LK NR FAIRVIEW BOAT RAMP F06D0																				
05/21/85	5050		9.9	44.4F	7.6	75	4.0	6.0	2.0	4	--	1.0	1.0	--	4	--			34	0.0
1300	5050		101	16.0C			.20	.44	.09	.01		.02	.03		14F	--				
07/18/85	5050		9.0	65.5F	7.8	89	4.0	5.0	2.0	4	--	2.0	1.0	--	4	--			34	0.0
1445	5050		104	17.0C			.20	.44	.09	.01		.04	.03		14F	--				

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q	OD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						
						CA	MG	NA	K	CO3	SO4	CL	NO3	B	F	TDS SUM	TM MCH	SAR ASAR	RE1	
F4 1050.00		TRINITY R & MOOPA										F06A1								
10/22/84 1045	5050 5050	12.89 1030	11.3 107	54.5F 12.5C	7.9	103	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/03/84 1100	5050 5050	19.38 11000	12.6 107	46.4F 8.0C	7.8	144	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
04/15/85 1320	5050 5050	16.97 5790	10.8 105	57.2F 14.0C	7.6	126	--	--	--	--	--	--	--	--	--	--	44F	--	--	--
06/04/85 1100	5050 5050	13.56 1540	10.0 106	64.4F 18.0C	7.7	152	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
08/05/85 0940	5050 5050	12.14 779	9.4 108	71.6F 22.0C	7.8 8.3	160 161	18 .90	7.0 .58	4.0 .17	-- 1.38	69	--	3.0 .08	--	0A	--	--	74 5	0.2 0.3	--
09/30/85 1000	5050 5050	11.69 563	9.8 102	62.6F 17.0C	7.9	162	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
F4 1376.00		TRINITY R NR BJUNT RM										F06A3								
10/22/84 0930	5050 5050	11.4 566	50.0F 104	7.8 10.0C	7.8	134	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
12/03/84 1005	5050 5050	12.3 3070	44.6F 104	7.4 7.0C	7.4	153	--	--	--	--	--	--	--	--	--	--	24F	--	--	--
02/05/85 1030	5050 5050	12.6 871	39.2F 99	7.5 4.0C	7.5 8.1	155 156	17 .65	7.0 .36	4.0 .11	-- 1.34	67	--	3.0 .08	--	1A	--	--	72 5	0.2 0.3	--
04/15/85 1205	5050 5050	10.8 2930	55.4F 105	13.0C	7.5	93	--	--	--	--	--	--	--	--	--	--	24F	--	--	--
06/04/85 0930	5050 5050	9.8 771	62.6F 104	17.0C	7.9	128	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
08/05/85 0850	5050 5050	9.2 528	66.2F 102	19.0C	7.6	121	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
09/30/85 0915	5050 5050	9.9 429	59.0F 101	13.0C	7.7	124	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
F4 1640.00		TRINITY R & LEVISTON										F06C1								
10/22/84 0930	5050 5050	3.69 304	10.7 98	48.2F 9.0C	7.2	79	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
12/03/84 0650	5050 5050	3.70 308	12.6 113	46.4F 8.0C	7.0	81	--	--	--	--	--	--	--	--	--	--	24F	--	--	--
02/05/85 0910	5050 5050	3.73 336	11.6 100	43.7F 6.5C	7.4	87	--	--	--	--	--	--	--	--	--	--	04F	--	--	--
04/15/85 1045	5050 5050	3.55 275	10.6 107	54.5F 12.5C	7.4	90	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
06/04/85 0825	5050 5050	3.62 303	10.3 103	55.4F 13.0C	7.8	83	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
08/05/85 0730	5050 5050	3.95 453	10.7 103	51.6F 11.0C	7.5 8.2	82 82	4.0 .20	6.0 .49	2.0 .09	-- 1.76	38	--	1.0 .03	--	0A	--	--	34 0	0.1 0.1	--
09/30/85 0500	5050 5050	3.73 355	11.0 100	47.3F 8.5C	6.4	80	--	--	--	--	--	--	--	--	--	--	14F	--	--	--
F5 1100.00		M40 R NR ARCAT										F0740								
10/22/84 1425	5050 5050	4.00 141	12.5 123	59.0F 15.0C	6.4	190	--	--	--	--	--	--	--	--	--	--	24F	--	--	--
12/03/84 1210	5050 5050	6.55 5250	11.5 102	45.2F 9.0C	7.3	89	--	--	--	--	--	--	--	--	--	--	624F	--	--	--
02/05/85 1205	5050 5050	4.32 226	12.6 102	42.0F 6.0C	6.4	157	--	--	--	--	--	--	--	--	--	--	24F	--	--	--
04/15/85 1710	5050 5050	4.62 372	11.3 109	57.2F 14.0C	7.4	192	--	--	--	--	--	--	--	--	--	--	44F	--	--	--
05/04/85 1445	5050 5050	3.93 184	11.6 122	64.4F 18.0C	5.6	163	--	--	--	--	--	--	--	--	--	--	54F	--	--	--
08/05/85 1355	5050 5050	3.71 91	9.7 105	67.1F 19.5C	5.6 6.0	150 200	28 1.40	4.0 .33	5.0 .22	-- 1.68	84	--	3.0 .08	--	1A	--	--	86 3	0.2 0.3	--

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.P. Q	DO SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER			
							CA	MG	NA	K	CaCO3	PERCENT REACTANCE	SO4	CL	NO3	TU88	5102	TDS SUM	TH MCH	SAR	ASAR	RE4
		F5	1100.00			MAO R NR ARCAT										F0940 CONTINUED						
09/30/85	5050	3.92	11.6	59.0F	6.2	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1255	5050	78	115	15.0C													14F	--				
		F5	5100.00			RE04000 C A ORICA										F0740						
10/22/84	5050	5.77	11.4	59.9F	7.8	153	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1515	5050	153	114	15.5C													14F	--				
12/03/84	5050	10.58	12.2	49.2F	7.3	70	--	--	--	--	--	--	--	--	--	--	0	--	123			
1300	5050	3790	105	9.0C													084F	--				
02/05/85	5050	6.33	12.9	44.6F	7.2	107	14	2.0	4.0	--	33	--	4.0	--	--	--	4.0	--		43	0.3	
1255	5050	277	106	7.0C	7.9	103	.70	.16	.17		.70	--	.11	--	--	--	14	--		8	0.2	5
04/15/85	5050	6.92	10.4	54.3F	7.4	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1750	5050	625	97	12.5C													44F	--				
06/05/85	5050	6.14	9.8	58.1F	7.5	114	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
0550	5050	218	96	14.5C													14F	--				
08/05/85	5050	5.38	10.0	66.2F	7.1	140	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
1210	5050	25	107	19.0C													14F	--				
09/30/85	5050	5.28	11.4	59.0F	7.3	127	18	3.0	6.0	--	52	--	7.0	--	--	--	4.0	--		32	0.4	
1345	5050	16	113	15.0C	6.0	131	.80	.25	.26		1.04	--	.20	--	--	--	24F	--		1	0.4	5
		F6	1100.00			EEL R A SCOTIA										F11A2						
10/23/84	5050	10.6	58.1F	7.9	293	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1010	5050	744	104	14.5C													14F	--				
12/04/84	5050	11.5	47.3F	7.4	133	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1005	5050	23700	98	6.5C													1124F	--				
02/06/85	5050	12.4	46.4F	7.8	206	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1010	5050	1540	105	8.0C													24F	--				
04/16/85	5050	10.1	59.0F	7.8	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1130	5050	3790	100	15.0C													34F	--				
06/05/85	5050	13.2	67.1F	8.5	207	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
0845	5050	573	143	19.5C													24F	--				
08/06/85	5050	8.7	70.7F	6.0	288	35	10	10	--	127	--	6.0	--	--	--	--	.1	--		129	0.4	
0945	5050	83	98	21.5C	6.4	295	1.75	.62	.44		2.54	--	.17	--	--	--	24	--		2	0.7	5
		F6	1154.50			EEL R A SOUTH FORK										F11C1						
10/24/84	5050	10.0	57.2F	7.7	313	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
0730	5050	257	97	14.0C													14F	--				
12/04/84	5050	11.1	47.3F	7.5	131	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1030	5050	11400	95	6.5C													554F	--				
02/06/85	5050	12.3	43.7F	7.7	208	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1050	5050	854	100	6.5C													34F	--				
04/17/85	5050	10.0	57.2F	7.8	183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
0845	5050	2510	97	14.0C													34F	--				
05/05/85	5050	9.9	68.0F	6.2	222	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
0925	5050	297	109	20.0C													24F	--				
08/06/85	5050	10.9	71.6F	6.2	273	35	9.0	8.0	--	114	--	5.0	--	--	--	--	.2	--		125	0.3	
1015	5050	24	123	22.0C	8.3	280	1.75	.74	.35		2.28	--	.14	--	--	--	04	--		11	0.3	5
		F6	1329.50			EEL R A OUTLET C NP 005 RIOS										F11F2						
10/24/84	5050	10.7	55.4F	6.1	266	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
005	5050	15	105	13.0C													14F	--				
12/04/84	5050	11.5	47.3F	7.5	133	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1145	5050	1200	101	6.5C													114F	--				
02/06/85	5050	12.1	43.7F	7.5	179	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1535	5050	139	101	6.5C													24F	--				
04/17/85	5050	10.4	59.9F	7.0	183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1110	5050	181	107	14.5C													24F	--				

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. D	OD SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				RE4		
							CA	MG	NA	K	CaCO3	SO4	CL	NO3	TJRB	SIO2	TOS SUM	TH MCM		SAR ASAR	
***** F6 1329.50 EEL R 4B OUTLET C NR ODS RIOS F11F2 CONTINUED *****																					
05/03/85	5050		9.7	73.4F	8.5	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1150	5050	25	115	21.0C													2AF				
08/26/85	5050		10.3	80.6F	9.7	217	22	8.0	11	--	84	--	5.0	--	.3	--			89	0.5	
1255	5050	3.3	128	27.0C	8.2	223	1.10	.86	.48		1.58	--	.14	--	1A	--			4	0.7	
							49	29	21											5	
***** F5 1350.00 OUTLET C NR LOWGVALE F11F2 *****																					
10/24/84	5050		10.3	54.5F	7.9	346	--	--	--	--	--	--	--	--	--	--					
0955	5050	2.0	120	12.5C													1AF				
12/04/84	5050		11.8	47.3F	7.1	91	--	--	--	--	--	--	--	--	--	--					
1240	5050	739	124	8.3C													14AF				
02/06/85	5050		10.9	42.8F	7.5	179	--	--	--	--	--	--	--	--	--	--					
1530	5050	55	89	8.0C													3AF				
04/17/85	5050		10.3	60.8F	8.0	168	--	--	--	--	--	--	--	--	--	--					
1100	5050	76	107	16.0C													3AF				
06/03/85	5050		10.9	66.2F	8.5	228	--	--	--	--	--	--	--	--	--	--					
1135	5050	14	121	19.0C													2AF				
08/06/85	5050		11.4	80.6F	9.4	283	25	11	18	--	117	--	17	--	1.7	--			108	0.8	
1250	5050	.5	147	27.0C	8.5	292	1.25	.90	.78		2.34	--	.48	--	1A	--			0	1.2	
							43	31	27											5	
***** F6 3039.01 EEL R #F 4 ODS #135 F1102 *****																					
10/24/84	5050		6.78	10.9	55.4F	8.1	275	31	9.0	10	--	90	--	9.0	--	.1	--			115	0.4
1030	5050	85	105	13.0C	7.9	277	1.55	.74	.44		1.80	--	.25	--	2A	--			25	0.6	
							57	27	16											5	
12/04/84	5050		10.10	12.2	43.7F	7.7	135	--	--	--	--	--	--	--	--	--					
1305	5050		2910	102	8.3C												24AF				
02/06/85	5050		6.39	12.8	40.1F	7.6	206	--	--	--	--	--	--	--	--	--					
1305	5050	384	102	4.5C													1AF				
04/17/85	5050		9.76	10.8	55.4F	7.7	137	17	9.0	4.0	--	98	--	1.0	--	.C	--			63	0.2
1135	5050		105	13.0C	7.8	138	.85	.41	.17		1.16	--	.03	--	5A	--			5	0.2	
							59	29	12											5	
05/23/85	5050		5.34	10.6	64.2F	8.5	192	--	--	--	--	--	--	--	--	--					
1230	5050	136	117	19.0C													2AF				
05/20/85	5050		4.65	10.1	79.7F	8.7	294	--	--	--	--	--	--	--	--	--					
1310	5050	14	129	26.3C													1AF				
***** F6 3050.00 MILL C NR COVELO F1101 *****																					
12/04/84	5050		11.4	44.6F	7.3	151	--	--	--	--	--	--	--	--	--	--					
1340	5050	55E	98	7.0C													12AF				
02/06/85	5050		46.4F	8.3	321	31	20	9.0	--	162	--	5.0	--	.1	--					160	0.3
1440	5050	40E	8.0C	8.2	341	1.55	1.84	.39		3.24	--	.14	--	3A	--					0	0.6
							43	.86	11											5	
04/17/85	5050		7.9	61.7F	7.9	271	--	--	--	--	--	--	--	--	--	--					
1215	5050	20E	105	16.3C													3AF				
05/03/85	5050		9.6	73.4F	9.1	362	--	--	--	--	--	--	--	--	--	--					
1300	5050	3E	116	23.0C													2AF				
***** F5 3120.01 EEL R 4B BLACK BUTTE # F1101 *****																					
10/24/84	5050		11.3	53.6F	8.1	209	24	9.0	--	96	--	11	--	.1	--					80	0.4
1145	5050	50E	107	12.0C	8.0	205	1.20	.41	.39		1.32	--	.31	--	1A	--			15	0.6	
							60	21	20											5	
12/04/84	5050		12.3	41.9F	7.3	101	--	--	--	--	--	--	--	--	--	--					
1430	5050	300E	102	5.5C													4AF				
02/05/85	5050		12.8	40.1F	7.4	143	18	4.0	4.0	--	55	--	3.0	--	.1	--				62	0.2
1435	5050	73E	104	4.5C	5.1	142	.90	.33	.17		1.10	--	.06	--	1A	--			7	0.2	
							64	24	12											5	
04/17/85	5050		11.1	41.8F	7.5	94	12	2.0	2.0	--	39	--	1.0	--	.C	--				38	0.1
1310	5050	653DE	105	11.0C	7.8	50	.85	.16	.09		.78	--	.03	--	2A	--			0	0.1	
							71	.18	11											5	
05/25/85	5050		10.7	66.2F	8.4	166	--	--	--	--	--	--	--	--	--	--					
1340	5050	103E	121	19.0C													1AF				
05/26/85	5050		10.7	80.6F	8.6	321	--	--	--	--	--	--	--	--	--	--					
1400	5050	2E	145	27.0C													1AF				

TABLE C-1 (CONTINUED)
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. O	DO SAT	TEMP	FIELD LABORATORY PM EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						RE4
						CA	MG	NA	K	CACO3	SO4	CL	MOS	TURB	SIQ2	TDS SUM	TH MCM	SAR 45AR		
F6 3200.00 BLACK BUTTE R NR COVELO F1161																				
10/24/84	5050		10.7	57.2F	7.9	303	48	7.0	7.0	--	97	--	5.0	--	.0	--	187	144	0.3	
1400	5050	10E	109	14.0C	8.1	304	2.30	.35	.30	1.94	--	.08	--	14	--	--	47	0.4		
12/04/84	5050		11.9	41.9F	7.4	145	--	--	--	--	--	--	--	--	--	--	--	--	--	
1420	5050	200E	99	5.5C										134F	--					
02/08/85	5050		12.3	42.8F	7.7	201	29	5.0	4.0	--	77	--	2.0	--	.0	--		93	0.2	
1400	5050	125E	103	6.0C	8.1	206	1.45	.41	.17	1.54	--	.06	--	24	--	--	19	0.3		5
04/17/85	5050		10.8	53.6F	7.6		18	3.0	3.0	--	50	--	1.0	--	.0	--	82	58	0.2	
1325	5050	70E	103	12.0C	7.5	136	.70	.25	.13	1.00	--	.03	--	44	--	--	8	0.2		
06/05/85	5050		10.7	71.6F	8.4	213	--	--	--	--	--	--	--	--	--	--	--	--	--	
1345	5050	60E	128	22.0C										24F	--					
08/08/85	5050		9.6	84.2F	8.6	254	--	--	--	--	--	--	--	--	--	--	--	--	--	
1405	5050		130	29.0C										14F	--					
F6 4100.00 EEL R SF NR MIRANDIA F1162																				
10/24/84	5050		4.85	9.4	56.3F	7.8	245	27	9.0	9.0	--	94	--	7.0	--	.1	--	105	0.4	
0800	5050	120	91	15.5C	7.9	247	1.35	.74	.39	1.88	--	.20	--	24	--	--	11	0.6		
12/04/84	5050		9.88	11.4	49.1F	7.3	112	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050		5450	100	9.5C									614F	--					
02/08/85	5050		5.98	12.3	46.4F	7.8	174	--	--	--	--	--	--	--	--	--	--	--	--	
1115	5050		384	104	8.0C									14F	--					
04/17/85	5050		6.74	10.2	55.4F	7.6	160	17	6.0	7.0	--	68	--	3.0	--	.1	--	67	0.4	
0920	5050		804	97	13.0C	7.9	162	.85	.49	.30	1.36	--	.08	--	14	--	--	0	0.5	5
06/05/85	5050		6.01	10.0	69.8F	8.3	196	--	--	--	--	--	--	--	--	--	--	--	--	
1000	5050		175	112	21.0C									24F	--					
08/08/85	5050		5.67	9.3	71.6F	8.2	203	--	--	--	--	--	--	--	--	--	--	--	--	
1045	5050		43	106	22.0C									14F	--					
F6 5279.00 VAN GUZEN R NR BRIDGEVILLE F1163																				
10/23/84	5050		2.41	11.1	54.5F	7.9	234	30	7.0	6.0	--	86	--	4.0	--	.0	--	139	104	0.3
0915	5050		67	105	12.5C	8.1	236	1.50	.58	.26	1.72	--	.11	--	24	--	--	18	0.4	
12/04/84	5050		5.27	12.1	43.7F	7.1	109	--	--	--	--	--	--	--	--	--	--	--	--	
0925	5050		1720	99	6.5C									304F	--					
02/08/85	5050		3.52	12.3	41.9F	7.6	172	21	5.0	4.0	--	69	--	2.0	--	.1	--	73	0.2	
0920	5050		126	98	5.5C	8.1	173	1.05	.41	.17	1.38	--	.06	--	34	--	--	4	0.3	5
04/18/85	5050		3.82	11.3	55.4F	7.5		17	5.0	4.0	--	58	--	2.0	--	.0	--	82	63	0.2
1030	5050		372	109	13.0C	8.7	141	.85	.41	.17	1.16	--	.06	--	24	--	--	5	0.2	
06/05/85	5050		2.69	10.2	64.4F	8.0	190	--	--	--	--	--	--	--	--	--	--	--	--	
0755	5050		38	108	18.0C									24F	--					
08/08/85	5050		2.23	8.7	67.1F	7.9	268	--	--	--	--	--	--	--	--	--	--	--	--	
0855	5050		8.9	95	19.5C									24F	--					
F7 1100.00 MATTOLE R NR PETROLIA F12C0																				
10/23/84	5050		3.96	12.0	59.9F	8.3	257	35	5.0	8.0	--	80	--	5.0	--	.1	--	157	108	0.3
1240	5050		92	120	15.5C	8.1	256	1.75	.41	.35	1.60	--	.14	--	24	--	--	28	0.5	
04/16/85	5050		4.79	10.3	59.0F	8.0		20	4.0	7.0	--	59	--	3.0	--	.0	--	103	66	0.4
1345	5050		102	15.0C	7.4	164	1.00	.33	.30	1.18	--	.08	--	14	--	--	8	0.4		
F7 2100.00 MATTOLE R NF A PETROLIA F12C0																				
10/23/84	5050		10.1	61.7F	7.9	340	--	--	--	--	--	--	--	--	--	--	--	--	--	
1230	5050		103	16.5C										14F	--					
04/16/85	5050		10.2	57.2F	7.9	235	--	--	--	--	--	--	--	--	--	--	--	--	--	
1325	5050	40E	99	14.0C										34F	--					
F7 5100.00 BEAR R A CAPETOWN F12B0																				
10/23/84	5050		11.5	59.0F	8.1	321	46	6.0	11	--	93	--	7.0	--	.1	--	198	140	0.4	
1120	5050	18E	114	15.0C	8.1	320	2.30	.49	.48	1.86	--	.20	--	24	--	--	47	0.7		
04/16/85	5050		10.6	57.2F	8.0	202	26	4.0	8.0	--	--	--	5.0	--	--	--	82	0.0		
1235	5050	80E	103	14.0C	7.0		1.30	.33	.35				.14	--	14	--	--	--	--	

TABLE C-2
MINOR ELEMENT ANALYSES OF SURFACE WATER

Lab and Sampler Agency Code

5050 - California Department of Water Resources

Abbreviations

TIME	- Pacific Standard Time on a 24-hour clock
EC	- Electrical conductance in microseimens at 25 o C
TEMP	- Water temperature at time of sampling in degrees Fahrenheit (F) or Celsius (C)
pH	- Measure of acidity or alkalinity of water
CHROM (ALL)	- All Chromium
CHROM (HEX)	- Hexavalent Chromium
D	- Dissolved
T	- Total

TABLE C-2
MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAT	FC	TEMP °F	ARSENIC	CONSTITUENTS IN *MILLIGRAMS PER LITER PARIUM CATHIUM CHROMIUM (HEX)	PER LITER COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC
10/03/84 1005	5050 5050	F3 1270.00	14.0C 8.0	--	--	0.00 0.12	T T	--	--
02/27/85 1000	5050 5050	151	43.0F 7.0	--	--	0.00 0.23	T T	--	0.01
05/15/85 0805	5050 4050	151	44.0F 7.7	--	--	0.00 0.12	T T	--	0.00
08/14/85 0405	5050 5050	F3 1327.00	21.0C 6.2	--	--	0.00 0.20	T T	--	0.02
05/14/85 2015	5050 5050	F3 1336.00	48.0F 8.3	--	--	0.00 0.18	T T	--	0.00
08/14/85 1040	5050 5050	202	22.0C 8.3	--	--	0.00 0.24	T T	--	0.01
05/14/85 1910	5050 5050	151	50.0F 8.2	--	--	0.00 0.15	T T	--	0.01
08/14/85 0835	5050 4050	233	21.5C 7.0	--	--	0.00 0.08	T T	--	0.02
02/26/85 1225	5050 5050	F3 1450.00	41.0F 8.2	--	--	0.00 0.46	T T	--	0.01
02/26/85 1335	5050 4050	112	40.5F 6.1	--	--	0.00 0.47	T T	--	0.00
05/14/85 2030	5050 5350	107	54.0F 7.8	--	--	0.00 0.23	T T	--	0.00

TABLE C-3
MISCELLANEOUS ANALYSES OF SURFACE WATER

Lab and Sampler Agency Codes

5050 - California Department of Water Resources

Abbreviations and Constituents

TIME	- Pacific Standard Time on a 24-hour clock
TEMP	- Water temperature at time of sampling in degrees Fahrenheit (F) or Celcius (C)
EC	- Electrical conductance in microseimens at 25 o C
DO	- Dissolved oxygen content in milligrams per liter
GH	- Instantaneous gage height in feet above an established datum
pH	- Measure of acidity or alkalinity of water: F = field determination, L = Lab determination
DISCH	- Instantaneous discharge in cubic feet per second (E = estimated)
MBAS	- Methylene blue active substance (a test for detergent surfactants) in milligrams per liter
DEPTH	- Depth in feet at which sample was collected
TURB	- Jackson Turbidity Units measured with a Hach Nephelometer, (A), if in the field, (F)
T+L	- Tannin and lignin as tannic acid in milligrams per liter
CHLOR	- Field determination of residual chlorine in milligrams per liter
O+G	- Oil and grease in milligrams per liter
COLOR	- True color in color units
SET S	- Settleable solids in milliliters per liter (ML/L) and milligrams per liter (MG/L)
BOD	- Biochemical oxygen demand in milligrams per liter: B = 5 days
SUS S	- Suspended solids in milligrams per liter; 5 = at 105 degrees C
COD	- Chemical oxygen demand in milligrams per liter
V SUS S	- Volatile suspended solids in milligrams per liter
CYANIDE	- Cyanide in milligrams per liter
PHENOLS	- Phenols in milligrams per liter
TOC	- Total organic carbon in milligrams per liter
DOC	- Dissolved organic carbon in milligrams per liter
IODIDE	- Iodide in milligrams per liter
T ODOR	- Threshold odor number at 60 degrees C
BROMIDE	- Bromide in milligrams per liter
SULFITE	- Sulfite in milligrams per liter
T SULF	- Total sulfides in milligrams per liter
D SULF	- Dissolved sulfides in milligrams per liter
CC EXT	- Carbon chloroform extract
CA EXT	- Carbon alcohol extract

TABLE C-3
MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	TEMP C	DO G.M.	F-PH L-PH	DITCH MILES	DEPTH TIDAL	TAL CHLOR	DNR COLOR	SET S PL/L M/L	ADD SUS S	CNE V. SUS S	CYANINE PHENOLS	TOC DOC	IODINE T. ODOOR	AMMONIA NITRATE	T. SILF D. SILF	CC EXT CA. EXT
10/23/84 1430	5050	F2 1046.00 13.30C 10.4 474 3.43			SHASTA R NP YVEKA					0.3 R		FC9E0					
12/18/84 0945	5050	4.45C 12.0 514 3.74								4 5	2						
05/08/85 1315	5050	14.0C 13.0 550 3.07								5 5	2						
08/21/85 0620	5050	17.0C								1.0 R							
09/10/85 1125	5050	14.0C 0.5 580 3.43								2.2 R							
02/27/85 1220	5050	F2 1055.00 4.2P			SHASTA R NP YVEKA C					12 5	4						
04/16/85 1105	5050	16.0C 11.1 576								5 5	3						
06/13/85 1050	5050	23.0C 9.7 640								6 5	2						
07/09/85 1125	5050	25.0C 9.6 627								8 5	2						
02/25/85 0940	5050	F2 1350.00 10.0C 10.0 426			SHASTA R NP CRENADA					2 5	2						
11/26/84 1330	5050	F2 5250.00 4.0C 13.0 178			SCOTT R NP FORT JONES					5.4 R							
05/08/84 1530	5050	14.5C 5.41								1.8 R							
09/10/85 1445	5050	15.5C 9.6 289 4.04								1.9 R							
02/27/85 1000	5050	F3 1260.01 43.0F 12.6 151			KIAMATH R & PLEASANT					4 5	3						
05/15/85 0605	5050	54.0F 10.3 135								0.8 R	2		2.8				
05/15/85 0515	5050	F3 1302.30 55.0F 10.7 143			KIAMATH R & SALMON RIVER					4 5	2						
02/27/85 0900	5050	F3 1327.00 42.0F 12.1 164			KIAMATH R & TI CREEK					4 5	2						
05/15/85 0444	5050	56.0F 10.6 150								4 5	2		2.5				
08/14/85 0905	5050	21.0C 4.5 196								12 5	5						
02/27/85 0945	5050	F3 1330.00 43.0F 12.1 141			KIAMATH R & MILLON C					4 5	2						
05/15/85 0400	5050	55.0F 11.7 144								1.3 R	3 5		2.7				
02/24/85 1445	5050	F3 1330.00 42.0F 12.1 171			KIAMATH R & INDEPENDENCE CREEK					4 5	2						
05/14/85 2050	5050	56.0F 4.0 156								5 4	3						
02/26/85 1400	5050	F3 1336.00 44.0F 12.4 148			KIAMATH R & DAY FLAT CREEK					4 5	3						
05/14/85 2014	5050	56.0F 10.3 159								1.2 R	3 5		3.6				
08/14/85 1040	5050	22.0C 4.7 167								1 5	1						
05/14/85 1940	5050	F3 1336.00 40.0F 11.7 164			KIAMATH R & HAPPY CAME					4 5	3		3.8				
12/17/84 1545	5050	F3 1447.00 45.0C 14.0 213			KIAMATH R NP FLEAD VLY					5 5	1						
05/14/85 1910	5050	54.0F 10.6 164								1.5 R	2		3.7				



TABLE C-3 (CONTINUED)
MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	TEMP EC	DO G.M.	F-PH L-PH	NISCH P.P.S	DEPTH TIPIR	T-L CHLOR	SET S D.G. ML/L COLOR MG/L	ROD SUS S	COO V SUS S	CYANIDE PHENOLS	TOC DOC	IONIDE T DOR	BROMIDE SILFITE	T SULF SILF	CC FXT CA EXT
F3	1460.00				KLAMATH R A SARAH TOTTEN CAMPGROUND						F05C3					
02/26/85 1225	5050 5050	41.0F 205	12.1	8.2	--	--	--	--	A 5	4	--	--	--	--	--	--
05/14/85 1845	5050 5050	59.0F 168	9.3	8.2	--	--	--	--	1 5	2	--	--	--	--	--	--
F3	1599.01				KLAMATH R RL IRON GT OM						F05C6					
12/18/84 1010	5050 5050	3.0C 177	13.4	7.5	--	--	--	--	7 5	2	--	--	--	--	--	--
F3	2240.00				DILLON C NR SOMESRAR						F05C1					
05/15/85 0405	5050 5050	47.0F 75	11.1	7.8	--	--	--	--	1 5	1	--	0.7	--	--	--	--
F3	2315.00				CLEAR C NR HAPPY CAMP						F05C1					
05/14/85 2030	5050 5050	52.0F 82	10.1	7.2	--	--	--	--	1 5	1	--	--	--	--	--	--
F3	2329.00				INDIAN C AT MOUTH						F05C2					
02/26/85 1335	5050 5050	40.5F 112	13.0	8.1	--	--	--	--	2 5	2	--	--	--	--	--	--
05/14/85 2000	5050 5050	54.0F 102	10.0	7.8	--	--	--	--	1 5	1	--	0.8	--	--	--	--
F3	4100.00				SALMON R A SOMESRAR						F05H1					
10/22/84 1205	5050 5050	10.5C 129	11.5	7.6	--	--	--	--	0.6 R	--	--	--	--	--	--	--
04/15/85 1440	5050 5050	11.0C 6.21	11.8	7.3	--	--	--	--	0.6 R 6 1	4	--	--	--	--	--	--
05/15/85 0535	5050 5050	50.0F 78	10.8	7.3	--	--	--	--	1.1 R 1 5	1	--	1.2	--	--	--	--
F6	3009.01				EEL R NF A NOS RIOS						F1102					
04/17/85 1135	5050 5050	13.0C 137	10.8	7.7	--	--	--	--	4 5	3	--	--	--	--	--	--
F6	3120.01				EEL R NF AR BLACK BUTTE R						F11F1					
04/17/85 1310	5050 5050	11.0C 94	11.1	7.8	6500 E	--	--	--	1 5	2	--	--	--	--	--	--
F6	3200.00				BLACK BUTTE P NR COVELO						F11G1					
10/24/84 1140	5050 5050	14.0C 303	10.7	7.9	10 E	--	--	--	0.9 R	--	--	--	--	--	--	--
04/17/85 1325	5050 5050	12.0C 10.8	10.8	7.6	70 E	--	--	--	0.6 R 7 5	2	--	--	--	--	--	--
F6	5279.00				VAN RIJZEN R NR BRIDGEVILLE						F11H3					
10/23/84 0915	5050 5050	12.5C 234	11.1	7.9	--	--	--	--	0.8 R	--	--	--	--	--	--	--
04/16/85 1030	5050 5050	13.0C 3.82	11.3	7.5	--	--	--	--	0.4 R 3 5	2	--	--	--	--	--	--
F7	1100.00				MATTLE R NR PFTROLIA						F12C0					
10/23/84 1240	5050 5050	15.5C 297	12.0	8.3	--	--	--	--	0.5 R	--	--	--	--	--	--	--
04/16/85 1349	5050 5050	15.0C 4.79	10.3	8.0	--	--	--	--	0.3 R 2 5	2	--	--	--	--	--	--
F7	5100.00				REAR P A CAPETOWN						F12H3					
10/23/84 1120	5050 5050	15.0C 321	11.5	8.1	1R E	--	--	--	0.6 R	--	--	--	--	--	--	--
04/16/85 1235	5050 5050	14.0C 10.6	10.6	8.0	RD E	--	--	--	0.4 R 6 5	4	--	--	--	--	--	--

TABLE C-4

NUTRIENT ANALYSES OF SURFACE WATER

Lab and Sampler Agency Code

5050 - California Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock
 GH - Instantaneous gage height, in feet, above an established datum
 Q - Instantaneous discharge in cubic feet per second
 TEMP - Water temperature at time of sampling in degrees Fahrenheit (F) or Celsius (C)
 Depth - Depth, in feet, when measurement was taken
 F EC - Field determination of electrical conductance in microseimens at 25°C
 F PH - Field determination of acidity or alkalinity
 TURB - Jackson Turbidity Units measured with a Hach Nephelometer, (A), if in the field, (F)
 F-CO2 - Field determination of carbon dioxide in milligrams per liter
 P ALK - Field determination of alkalinity (Phenol)
 T ALK - Field determination of alkalinity (Total)

(Nitrogen Series as N)

D N02+N03 - Dissolved nitrite and nitrate
 D N02 - Dissolved nitrite
 D N03 - Dissolved nitrate
 D ORG N - Dissolved organic nitrogen
 T ORG N - Total organic nitrogen
 D NH 3 - Dissolved ammonia
 T NH 3 - Total ammonia
 T (NH3+ORG N) - Total ammonia plus organic nitrogen

(Phosphorus Series as P)

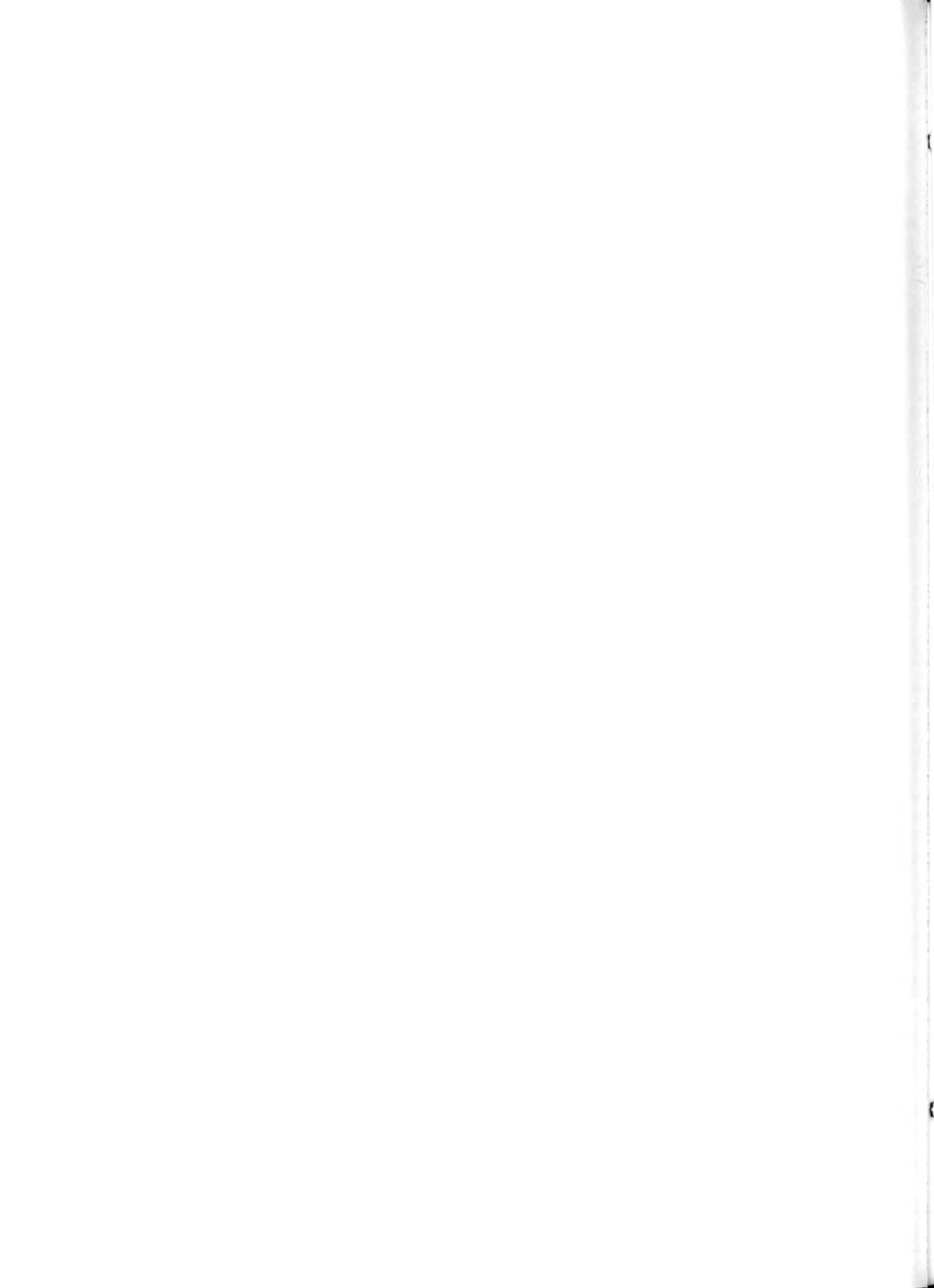
DIS.A.H.P04 - Dissolved acid hydrolyzable phosphate
 D O-P04 - Dissolved orthophosphate
 T O-P04 - Total orthophosphate
 D TOT P - Dissolved total phosphorus
 T TOT P - Total phosphorus

TABLE C-4
NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAT	G.M. D	TEMP DEPTH	F.C. F.W.	THIR F.C2	FIELD P.ALV T.ALV	N.ND2 ND3	N.ND2 ND3	CONSTITUENTS IN MILLIGRAMS PER LITER				D.TOT P T.TOT P		
									O.DRG N T.DRG N	O.NH3 T.NH3	T.NH3 OPR N	OIS A.M.P.O.			
05/22/85 1000	5050 4050	F2 P 132.0	22.5 20.0C 0	26A 4.3	24F	RES NR OM	0.01	--	FC5E0	--	0.02	--	0.00	--	0.03
05/22/85 1000	5050 5050		12.5C 4.0	26A 7.9	34F		0.02	--	--	0.28	--	0.02	--	--	0.11
09/10/85 1300	4050 5050		17.2C 0	34A 4.4	44F		0.00	--	--	0.01	--	0.03	--	--	0.09
09/10/85 1300	4050 5050		14.5C 34	36A 4.1	54F		0.00	--	--	0.06	--	0.03	--	--	0.12
		F2 1650.00				SWASTA P NR YPEKA			F05E0						
10/23/84 1430	5050 5050		3.50	17.0C	47B 4.4	44F	0.11	--	--	--	--	--	0.10	--	--
12/14/84 0445	5050 5050		9.74	4.5C	51A 4.4	34F	0.32	--	--	--	--	--	0.11	--	--
05/08/85 1314	4050 5050		9.07	14.0C	550 4.4	34F	0.03	--	--	--	0.3	--	0.22	--	0.16
06/21/85 0420	5050 5050		2.73	17.0C	415 4.4	24F	0.00	--	--	--	0.4	--	0.13	--	0.24
		F2 1655.00				SWASTA P AR YPEKA C			F05E0						
02/27/85 1220	5050 5050		9.0C	240 E	42B 4.3	54F	0.14	--	--	--	0.4	--	0.11	--	0.15
04/16/85 1105	5050 5050		14.0C	150 E	57A 4.2	34F	0.02	--	--	--	0.8	--	0.25	--	0.29
04/13/85 1050	5050 4340		23.0C	35 E	440 4.3	34F	0.01	--	--	--	--	--	0.11	--	0.23
07/09/85 1125	5050 5050		25.0C	35 E	427 4.6	44F	0.00	--	--	--	1.0	--	0.15	--	0.23
		F2 1350.00				SWASTA R NR GREENLAND			F05E0						
02/25/85 0940	5050 5050		10.0C	130 E	42A 4.0	24F	0.22	--	--	--	0.2	--	0.13	--	0.15
03/12/85 1140	5050 5050		9.5C	120 F	437 4.2	34F	0.18	--	--	--	0.3	--	0.14	--	0.14
		F2 5250.00				SCOTT R NR FORT JONES			F0502						
11/26/84 1330	5050 5050		4.0C		17A 7.4		0.23	--	--	--	--	--	0.02	--	--
09/08/85 1530	5050 5050		14.5C	5.26	153 4.1	34F	0.12	--	--	--	0.2	--	0.01	--	0.02
09/10/85 1445	5050 5050		15.4C	4.04	260 4.4	14F	0.36	--	--	--	--	--	0.00	--	--
		F3 L 154.4	220.0			CORCO L NR CORCO			F05C7						
05/21/85 1800	5050 5050		10.4C 0		137 4.3	24F	0.00	--	--	0.01	--	--	0.02	--	--
05/21/85 1800	5050 5050		10.0C 6.0		154 7.0	34F	0.30	--	--	0.33	--	--	0.16	--	0.23
09/19/85 0845	5050 5050		14.2C 0		260 7.4	24F	0.44	--	--	0.17	--	--	0.14	--	0.21
04/19/85 0445	5050 5050		13.0C 4.7		20A 4.4	44F	0.42	--	--	0.60	--	--	0.22	--	0.35
		F3 P 164.0	224.1			JOHNGATE RES NR HORNRODY			FC5C6						
05/22/85 0744	5050 4050		13.5C 0		131 4.4	34F	0.00	--	--	0.02	--	--	0.01	--	0.10
05/22/85 0745	5050 5050		14.1C 23		134 4.6	34F	0.01	--	--	0.02	--	--	0.02	--	0.07
09/10/85 0714	5050 5050		14.7C 0		267 7.3	34F	0.40	--	--	0.21	--	--	0.15	--	0.20
09/10/85 0715	5040 4050		14.7C 13		263 7.2	24F	0.42	--	--	0.22	--	--	0.16	--	0.21
		F3 1655.00				KLEWATH R & KLEWATH GLEN			FC541						
04/04/85 1254	5050 5050		14.73 22.0C		14C 4.4	24F	0.00	--	--	--	0.2	--	0.01	--	0.03
		F3 1710.00				KLEWATH R & CLEANS			F0542						
10/03/84 1005	5050 5050		14.97 14.0C		431 4.0	34F	0.14	--	--	--	0.6	--	--	--	0.12
10/22/84 1140	4050 5050		9.84 13.4C		14A 4.0	44F	0.52	--	--	--	--	--	0.09	--	0.14
02/27/85 1003	5040 4050		43.0F 405C		141 7.4	44F	0.70	--	--	--	0.3	--	0.01	--	0.04
05/15/85 0635	4050 5050		44.1F		135 7.7	14F	0.00	--	--	--	0.1	--	0.01	--	0.02
09/14/85 0920	4050 5050		14.22 22.4C		144 4.3	44F	0.00	--	--	--	0.5	--	0.04	--	0.04

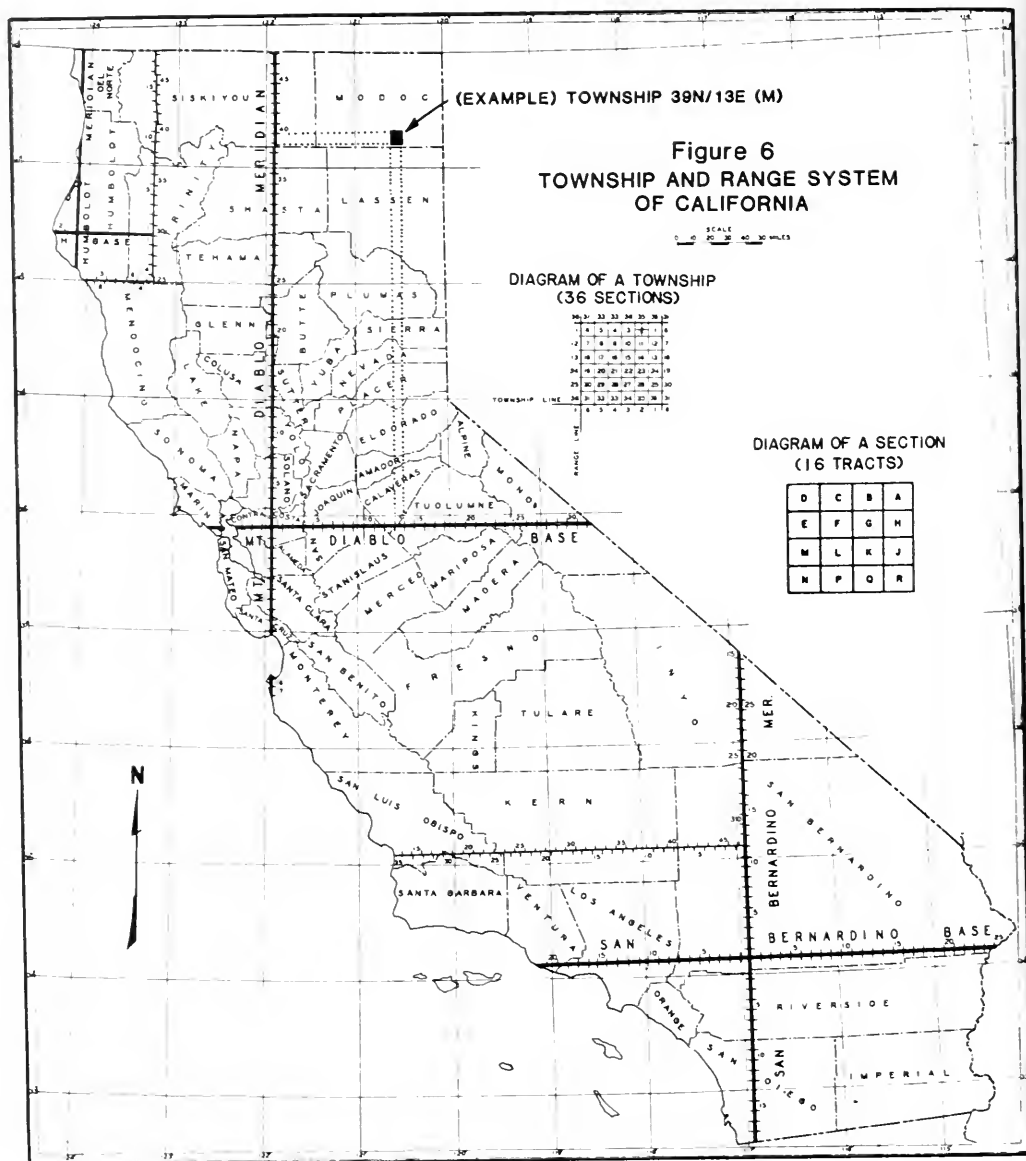
TABLE C-4 (CONTINUED)
NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	C.M. O	TEMP DEPTH	F EC F MN	THRA F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 NO3	CONSTITUENTS IN MILLIGRAMS PER LITER				D O-PO4 T O-PO4	D TOT P T TOT P
									D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.M.P.O4		
F3 4100.00				SALMON R A SOMESBAR				F05R1						
10/22/84	5050		10.5C	129	14F		0.00	--	--	--	--	0.00	--	
1205	5050			7.6				--	--	--	--	--	--	
04/15/85	5050		11.0C	58	2A		0.02	--	--	--	0.1	0.01	--	
1440	5050			7.3				--	--	--	--	--	0.01	
05/19/85	5050		50.0F	78	04F		0.00	--	--	--	0.0	0.00	--	
0935	5050			7.3				--	--	--	--	--	0.00	
F3 4100.00				ELK C A MO A HAPPY CAMP				F05C1						
10/02/84	5050		11.5C	182	14F		0.00	--	--	--	0.1	--	--	
0950	5050	2A E		8.0				--	--	--	--	--	0.01	
FA L 0409.0 245.0				CLAIR ENGLE LK NR FAIRVIEW ROAD RAMP				F06R0						
05/21/85	5050		18.0C	76	14F		0.00	--	--	0.01	--	0.00	--	
1300	5050		0	7.6				--	--	--	0.0	--	0.00	
05/21/85	5050		7.8C	78	14F		0.01	--	--	0.01	--	0.00	--	
1300	5050		8.2	7.3				--	--	--	0.0	--	0.00	
09/18/85	5050		14.6C	80	14F		0.01	--	--	0.03	--	0.00	--	
1015	5050		0	7.6				--	--	--	0.0	--	0.01	
09/18/85	5050		9.3C	78	14F		0.01	--	--	0.01	--	0.00	--	
1015	5050		75	7.0				--	--	--	0.1	--	0.01	
FA 1000.00				TRINITY R A MOOPA				F06A1						
08/05/85	5050		12.14	180	14F		0.00	--	--	--	0.0	0.00	--	
0940	5050		770	7.8				--	--	--	--	--	0.01	
FA 1640.00				TRINITY R A LEVISTON				F06C1						
08/05/85	5050		3.95	82	14F		0.00	--	--	--	0.0	0.00	--	
0730	5050		455	7.5				--	--	--	--	--	0.00	
F6 3000.01				EEL R HF A DMS RIOS				F1102						
10/24/84	5050		6.78	275	14F		0.00	--	--	--	0.1	0.00	--	
1030	5050		85	8.1				--	--	--	--	--	0.01	
04/17/85	5000		8.96	137	44F		0.00	--	--	--	--	0.01	--	
1135	5050		1550	7.7				--	--	--	0.2	--	0.01	
F6 3050.00				MILL C NR COVELO				F11G1						
02/06/85	5050		8.0C	321	14F		0.01	--	--	--	0.3	0.01	--	
1440	5050		40 E	8.3				--	--	--	--	--	0.02	
F6 3200.00				BLACK BUTTE R NR COVELO				F11G1						
10/24/84	5050		14.0C	403	14F		0.00	--	--	--	--	0.00	--	
1140	5050		10 E	7.9				--	--	--	--	--	--	
02/06/85	5050		6.0C	201	24F		0.01	--	--	--	0.2	0.01	--	
1400	5050		125 E	7.7				--	--	--	--	--	0.01	
04/17/85	5050		12.0C	136	4A		0.01	--	--	--	0.1	0.01	--	
1325	5050		70 E	7.6				--	--	--	--	--	0.02	
F6 4100.00				EEL R SF NR MIRANDA				F11C2						
10/24/84	5050		13.5C	243	14F		0.00	--	--	--	0.1	0.00	--	
0800	5050		120	7.8				--	--	--	--	--	0.02	
F6 5270.00				VAN DIJZEN R NR ARIOGEVILLE				F11R3						
10/23/84	5050		12.5C	234	24F		0.00	--	--	--	--	0.00	--	
0915	5040		67	7.9				--	--	--	--	--	--	
04/16/85	5050		13.0C	141	2A		0.03	--	--	--	0.0	0.00	--	
1030	5050		372	7.5				--	--	--	--	--	0.01	
F7 1100.00				MATTOLE R NR PETROLIA				F12C0						
10/23/84	5050		15.5C	257	14F		0.00	--	--	--	--	0.00	--	
1240	5050		02	8.3				--	--	--	--	--	--	
04/16/85	5050		15.0C	140			0.02	--	--	--	0.0	0.02	--	
1345	5050			8.0				--	--	--	--	--	0.02	
F7 5100.00				REAR R A CAPETOWN				F12R0						
10/23/84	5050		15.0C	321	14F		0.00	--	--	--	--	0.00	--	
1120	5050		18 E	8.1				--	--	--	--	--	--	
04/16/85	5050		14.0C	202	1A		0.12	--	--	--	0.0	0.01	--	
1235	5050		80 E	8.0				--	--	--	--	--	--	



APPENDIX D

GROUND WATER MEASUREMENTS



APPENDIX D

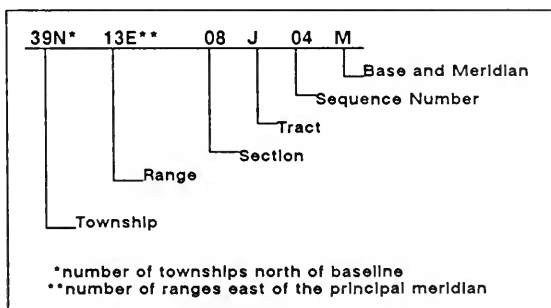
GROUND WATER MEASUREMENTS

Appendix "D" presents depth to water measurements (ground to water) and water surface elevations for selected wells in the North Coastal Area from October 1, 1984 to September 30, 1985.

The location of a well can be approximated by the well number. The numbering system for wells is based on a rectangular system called the United States System of Surveying the Public Lands, commonly referred to as the Public Lands Survey. This system ties all tracts of lands to an initial point and identifies them as being in a particular township. A township is a square parcel of land six miles on each side. Its location is established as being so many six-mile units east or west of a north-south line running through the initial point (called the "principal meridian") and so many six-mile units north or south of an east-west line running through the point (called the "baseline"). The meridional (longitudinal) lines parallel to, and east or west of, the principal meridian are called Range Lines. Latitudinal lines parallel to, and north or south of, the baseline are known as Township Lines. Each township is described with respect to the initial point by its distance (in numbers of six mile units) and direction from that point i.e., north or south and east or west.

Figure 6 presents the township and range system for California, and shows the three bases and meridians: i.e., the Humboldt (H), Mount Diablo (M) and San Bernardino (S). The figure also numbers the townships and ranges along the principal meridians and baselines, and shows the location of, for example, township 39N/13E M. The location of any township in the State can be found by extending the township and range lines as shown.

Every township is further divided into 36 equal parts called sections. A diagram of a typical township with the sections numbered from 1 to 36 is shown on Figure 6. The well numbering system is an extension of the public land survey system and involves dividing each section of land into sixteen 40-acre tracts with each tract given a letter (A through R) to identify it (see also Figure 6.) Sequence numbers in a tract are assigned in chronological order. A typical well number consists of 12 characters expressed as expressed as follows:



In the above example, this is the fourth well to be assigned a number in Tract J, Section 8 of the designated township.

Ground water measurement stations are listed in the tables by ascending areal code. The areal code is explained on page 2. Individual areal code numbers can be found in the tables to the left of the areal

names, and the data listed thereunder are in that areal code boundary. The number of ground water stations precludes plotting each individual well on maps in this publication. Instead, Figure 7 shows the location of the ground water basins in which measurements were taken.

To facilitate station location, the cross reference on the following page relates the areal code given in the tables to the ground water basin in which the station is located. The cross reference lists only areas in which measurements were taken.

The date shown in the table is the date when the depth measurement was made.

Some of the measurements in the "ground to water" column may be followed by a single digit in parenthesis which indicates a questionable measurement. The meaning of these codes is as follows:

- | | |
|---------------------------|----------------------------------------|
| (0) Caved or deepened | (5) Air or pressure gage measurement |
| (1) Pumping | (6) Other |
| (2) Nearby pump operating | (7) Recharge operation at or near well |
| (3) Casing leaking or wet | (8) Oil in casing |
| (4) Pumped recently | (9) Acoustic Sounder |

When the letters "NM" followed by a digit in parenthesis appears in the column, it means a measurement was attempted but could not be obtained. The reason for no measurement is described by the digit listed below:

- | | |
|-------------------------------|------------------------------|
| (0) Measurement Discontinued | (5) Unable to locate well |
| (1) Pumping | (6) Well has been destroyed |
| (2) Pump house locked | (7) Special |
| (3) Tape hung up | (8) Casing leaking or wet |
| (4) Cannot get tape in casing | (9) Temporarily inaccessible |

The words "FLOW" and "DRY" also appear in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number indicates that the static water level in the flowing well is this distance in feet above the ground surface.

Elevations are given in feet at USGS mean sea level datum, and are usually obtained by interpolation between contours of USGS topographic maps.

The final column is the code number for the agency supplying the data. The code for the California Department of Water Resources is 5050.

**APPENDIX D CROSS REFERENCE;
GROUND WATER BASIN—AREAL CODE**

<u>Ground Water Basin</u>			
No.	Name	Hydrologic Area*	Areal Code**
1-1	Smith River Plain	<u>SMITH RIVER</u>	<u>HU</u>
		Lower Smith River	HA
		Smith River Plain	HSA
1-3	Butte Valley	<u>KLAMATH RIVER</u>	<u>HU</u>
		Butte Valley	HA
		Macdoel-Dorris	HSA
1-4	Shasta Valley	Shasta Valley	HA
1-5	Scott River Valley	Scott River	HA
		Scott Valley	HSA
1-14	Lower Klamath River Valley	Lower Klamath River	HA
		Klamath Glen	HSA
1-9	Eureka Plain	<u>EUREKA PLAIN</u>	<u>HU</u>
1-10	Eel River Valley	<u>EEL RIVER</u>	<u>HU</u>
		Lower Eel River	HA
		Ferndale	HSA
1-11	Round Valley	Middle Fork Eel River	HA
		Round Valley	HSA
1-12	Laytonville Valley	South Fork Eel River	HA
		Laytonville	HSA
1-42	Sherwood Valley	Upper Main Eel River	HA
		Outlet Creek	HSA
1-26	Redwood Creek Valley	<u>REDWOOD CREEK</u>	<u>HU</u>
		Orick	HA
		<u>TRINIDAD</u>	<u>HU</u>
		Big Lagoon	HA

Note: All of the above hydrologic areas are in the North Coast Hydrologic Basin (HB)

* See page 2

** See Figure 2



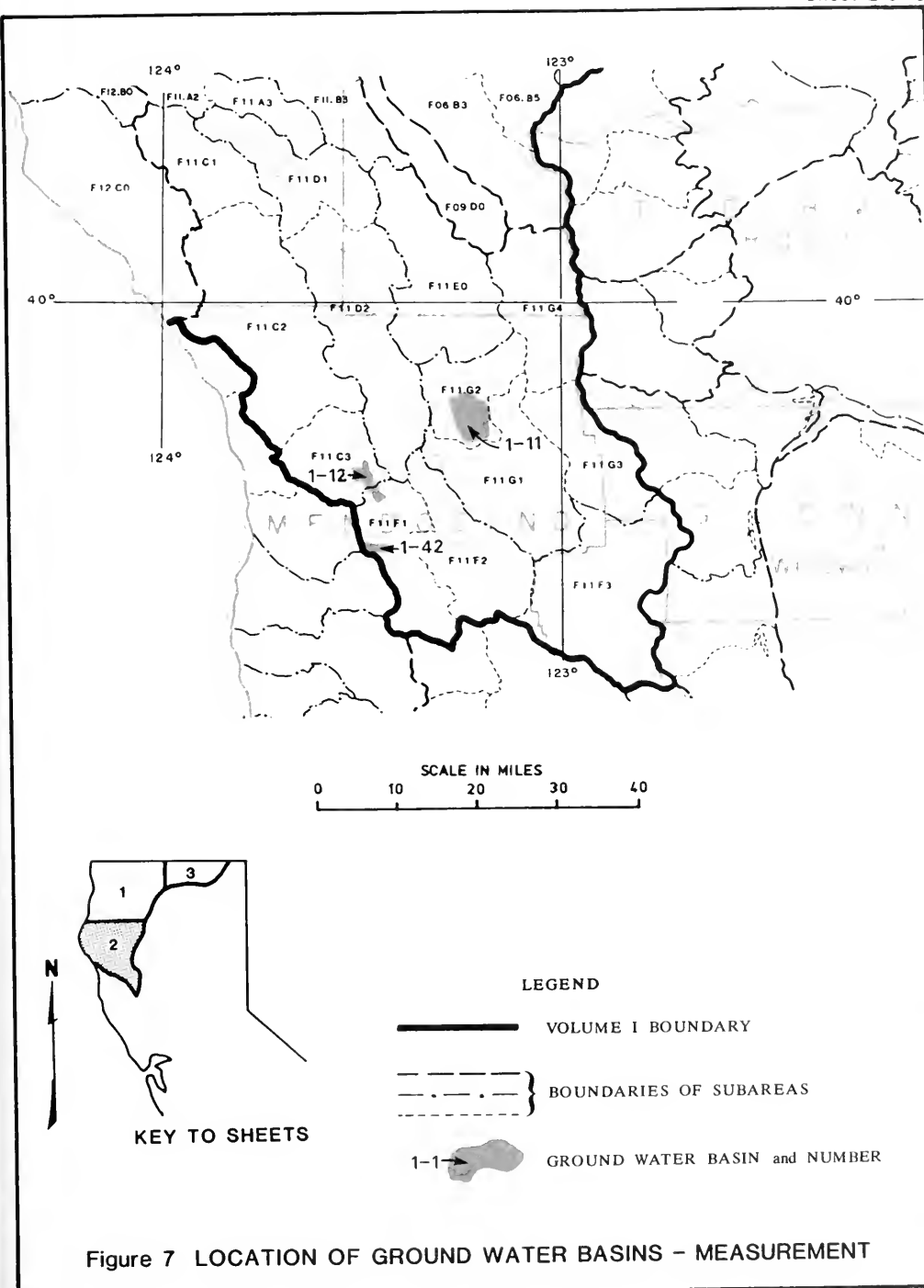


Figure 7 LOCATION OF GROUND WATER BASINS - MEASUREMENT

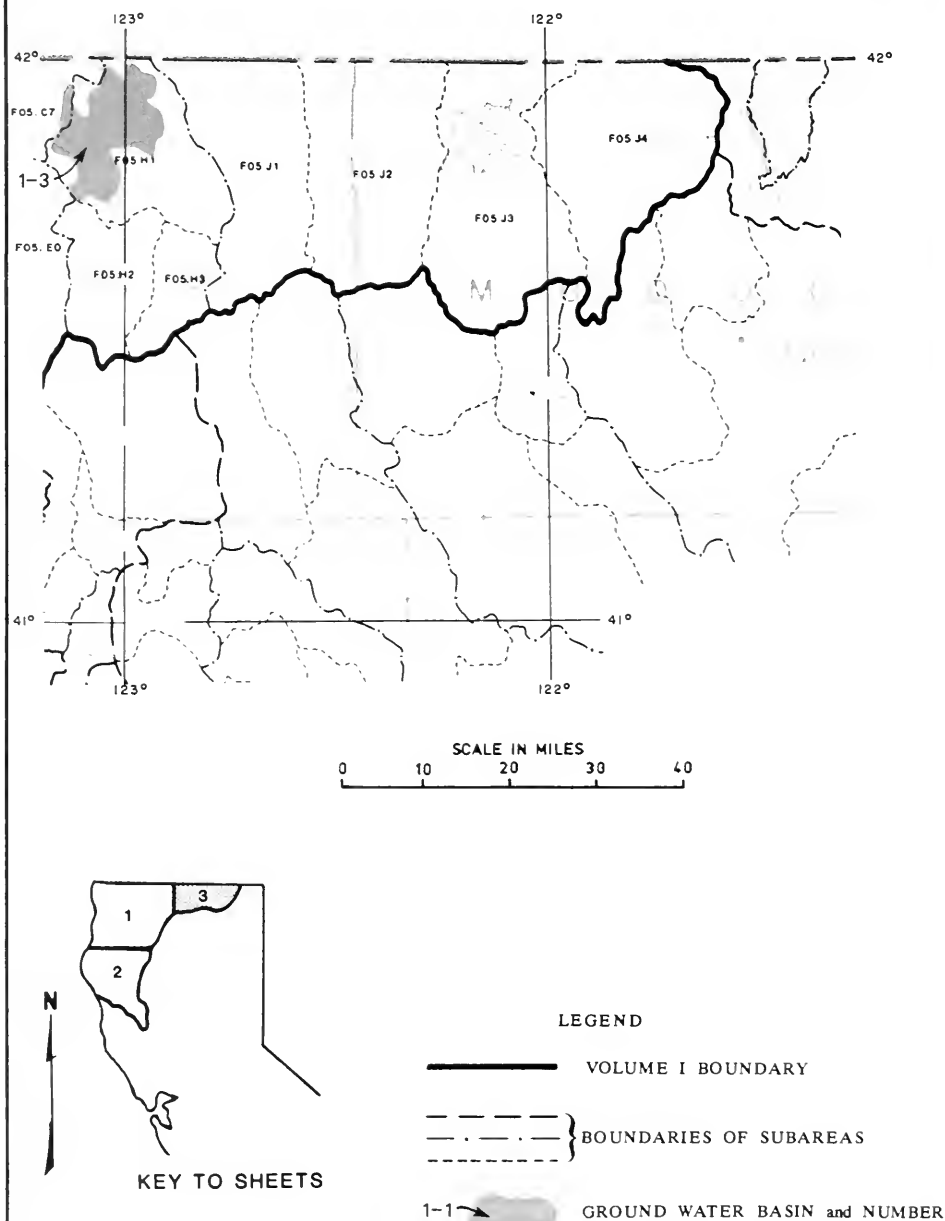


Figure 7 LOCATION OF GROUND WATER BASINS - MEASUREMENT

TABLE O
GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND WATER	WATER SURFACE ELEV.	AGENCY	STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND WATER	WATER SURFACE ELEV.	AGENCY
F F-03 F-03.4 F-03.41	NORTH COAST HA SMITH RIVER HI LOWER SMITH RIVER HA SMITH RIVER PLAIN HSA					F F-05 F-05.4 F-05.41	NORTH COAST HA KLAMATH RIVER HI LOWER KLAMATH RIVER HA KLAMATH GLEN HSA				
16N/01W-17401 H	44.0	10/29/84 03/13/85	21.4 17.0	24.2 31.0	*050	13N/01E-15901 H	50.6	10/29/84 03/13/85	16.7 16.2	33.3 33.8	5050
17N/01W-02801 H	31.0	10/29/84 03/13/85	19.8 14.1	11.2 16.9	*050	F-05.0 F-05.02	SCOTT RIVER HA SCOTT VALLEY HSA				
17N/01W-15402 H	21.0	10/29/84 03/13/85	12.6 10.4	8.4 13.4	*050	42N/05W-02402 H	2740.0	10/30/84 03/15/85	12.4 11.0	2733.2 2735.0	5050
17N/01W-20001 H		03/13/85	44.0		*050	42N/05W-27401 H	2930.0	10/30/84 03/15/85	4.3 8.0	2921.7 2922.0	5050
17N/01W-27005 H	40.0	10/29/84 03/13/85	14.5 12.3	21.5 27.7	*050	43N/05W-23501 H	2724.0	10/30/84 03/15/85	6.0 4.4	2722.0 2723.6	5050
18N/01W-27503 H	15.0	10/29/84 03/13/85	6.7 7.4	8.3 7.6	5050	43N/05W-24601 H	2735.0	10/30/84 03/15/85	9.9 11.5	2725.1 2723.5	5050
18N/01W-35402 H	90.0	10/29/84 03/13/85	33.9 24.7	54.1 65.3	*050	44N/05W-29901 H	2711.0	10/30/84 03/15/85	28.2 15.3	2682.8 2695.7	5050
						F-05.6	SWASTA VALLEY HA				
						42N/05W-20001 H	2882.0	10/30/84 03/14/85	8.8 8.2	2873.2 2873.6	5050
						42N/06W-10001 H	2835.0	10/30/84 03/14/85	9.9 7.6	2425.1 2827.4	5050
						43N/05W-11401 H	2743.0	10/30/84 03/14/85	126.6 125.7(8)	2613.4 2614.3	5050
						43N/06W-15503 H	2663.0	10/30/84 03/14/85	12.5 7.7	2650.9 2655.3	5050
						43N/06W-22401 H	2665.0	10/30/84 03/14/85	12.0 9.5	2653.0 2655.3	5050
						43N/06W-33501 H	2810.0	10/30/84 03/14/85	47.0 46.4	2763.0 2763.5	5050
						44N/05W-14401 H	2637.0	10/30/84 03/14/85	26.3(8) 30.0(8)	2608.7 2607.0	5050
						44N/06W-10501 H	2537.0	10/30/84 03/14/85	14.2 27.0	2514.8 2510.0	5050
						44N/06W-27501 H	2560.0	10/30/84 03/14/85	11.8 14.5	2546.2 2545.5	5050
						F-05.8 F-05.81	PUTTE VALLEY HA MACOEL-GOPRIS HSA				
						46N/01E-06401 H	4242.0	10/31/84 03/19/85	29.6 25.2	4212.4 4216.8	5050
						46N/01E-08001 H	4260.0	10/25/84 04/15/85	42.6 42.5	4217.4 4217.5	5050
						46N/01E-08001 H	4250.0	10/25/84 04/15/85	31.5 30.2	4218.5 4219.8	5050
						47N/01E-05501 H	4250.0	10/25/84 04/15/85	90.4(8) 94.6(8)	4190.2 4165.4	*050
						47N/01E-06402 H	4244.5	10/31/84 03/19/85	40.6 34.3	4203.9 4208.2	5050
						47N/01E-20001 H	4245.0	10/25/84 04/15/85	35.1(8) 29.31(4)	4204.9 4210.7	5050
						47N/01E-29002 H		10/25/84 04/15/85	NM=0 NM=8		5050
						48N/01W-06401 H	4258.0	10/31/84 03/19/85	40.1 31.7	4217.9 4226.3	5050
						48N/02W-04401 H	4250.0	10/25/84 04/15/85	24.1 19.9(8)	4235.9 4240.1	5050
						48N/02W-11501 H	4275.0	10/31/84 03/19/85	44.8 43.0	4228.2 4231.1	5050
						48N/01W-01001 H	4241.0	10/25/84 04/15/85	47.0(13) 33.9	4193.1 4207.1	*050
						48N/01W-04402 H	4238.0	10/25/84 04/15/85	16.4 17.3	4219.2 4220.7	5050
						48N/01W-08001 H	4400.0	10/25/84 04/15/85	NM=3 140.0	4220.0	5050
						48N/01W-10001 H	4360.0	10/25/84 04/15/85	157.5 157.0	4200.5 4203.0	5050
						48N/01W-17001 H	4244.0	10/31/84 03/19/85	42.4 34.2	4203.2 4211.8	5050
						48N/01W-17501 H	4255.0	10/25/84 04/15/85	29.1 22.7	4220.9 4227.3	5050
						48N/01W-18001 H	4247.0	10/31/84 03/19/85	29.3 23.7	4217.7 4223.3	5050
						48N/01W-20001 H	4254.0	10/25/84 04/15/85	17.4 32.0	4220.6 4226.0	5050
						48N/01W-20402 H	4244.0	10/25/84 04/15/85	70.0(8) NM=3	4225.1	*050

TABLE D (CONTINUED)
GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND TO WATER	WATER SURFACE ELEV.	AGENCY	STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND TO WATER	WATER SURFACE ELEV.	AGENCY
F-05 F-05.0 F-05.01	NORTH COAST MS KILPATRICK DRIVE HWY WHITE VALLEY - HA WATERGATE-070015 HAS					F-07 F-07.0 F-07.01	NORTH COAST MS PENNINGTON CREEK HWY ORICK HA				
46N/01W-31J01 "	4247.6	10/25/84 04/15/85	36.8 30.7	4220.7 4224.3	5050	16N/01F-04C01 W	21.0	10/29/84 03/13/85	15.0 14.7	420 7.3	5050
46N/02W-25J01 "	4252.0	10/25/84 04/15/85	7.2 7.8	4242.8 4247.5	5050	11N/01E-02R01 W	170.0	10/29/84 03/13/85	12.3 12.3	147.7 157.7	5050
46N/02W-75R02 "	4256.0	10/31/84 03/19/85	35.4 29.4	4219.1 4224.6	5050						
46N/02W-26L02 "	4249.0	10/25/84 04/15/85	11.8 10.0	4234.2 4230.0	5050						
46N/02W-26C03 "	4254.0	10/31/84 03/19/85	18.5 13.9	4237.5 4240.1	5050						
46N/02W-34R02 "	4300.0	10/25/84 04/15/85	42.8 (R) 53.8 (R)	4247.7 4244.2	5050						
46N/02W-35C01 "	4255.0	10/25/84 04/15/85	24.1 19.0	4230.9 4236.0	5050						
46N/02W-35F01 "	4260.0	10/25/84 04/15/85	30.0 24.3 (R)	4230.3 4235.7	5050						
47N/01W-02J01 "	4240.0	10/25/84 04/15/85	40.5 (R) 32.0 (R)	4199.5 4204.8	5050						
47N/01W-04R03 "	4241.5	10/31/84 03/19/85	5.5 1.2	4236.0 4238.3	5050						
47N/01W-04R02 "	4241.5	10/31/84 03/19/85	7.2 6.2	4234.3 4235.3	5050						
47N/01W-13F01 "	4240.0	10/25/84 04/15/85	21.4 20.0	4219.5 4220.0	5050						
47N/01W-13L01 "	4238.0	10/25/84 04/15/85	12.8 17.3	4222.2 4222.7	5050						
47N/01W-19L01 "	4249.0	10/31/84 03/19/85	4.3 4.0	4233.7 4234.0	5050						
47N/01W-23J01 "	4237.0	10/25/84 04/15/85	10.7 10.2	4224.3 4224.8	5050						
47N/01W-23J02 "	4237.0	10/25/84 04/15/85	14.4 15.1	4217.5 4215.9	5050						
47N/01W-23J03 "	4237.0	10/25/84 04/15/85	14.4 12.4	4217.5 4214.4	5050						
47N/01W-27R01 "	4233.0	10/31/84 03/19/85	9.3 7.9	4224.7 4224.1	5050						
47N/01W-34C01 "	4237.0	10/31/84 03/19/85	27.4 (R) 27.0 (R)	4209.2 4214.1	5050						
47N/01W-35L01 "	4234.0	10/25/84 04/15/85	14.1 (R) 15.1	4219.3 4219.9	5050						
47N/02W-21J01 "	4240.0	10/25/84 04/15/85	6.0 7.7 (R)	4232.3 4232.3	5050						
47N/02W-22C01 "	4245.0	10/25/84 04/15/85	17.1 12.8	4227.9 4232.2	5050						
47N/02W-23L01 "	4239.0	10/25/84 04/15/85	13.5 (R) 11.0	4225.2 4224.0	5050						
48N/01W-25R01 "	4244.0	10/25/84 04/15/85	71.8 66.2	4189.2 4171.3	5050						
48N/01W-26F01 "	4250.0	10/25/84 04/15/85	53.0 (R) 54.7 (R)	4190.0 4205.0	5050						
48N/01W-26F01 "	4247.0	10/25/84 04/15/85	34.1 23.4	4223.2 4217.4	5050						
48N/01W-28J01 "	4255.0	10/25/84 04/15/85	43.1 37.4	4211.0 4217.4	5050						
48N/01W-28J02 "	4255.0	10/25/84 04/15/85	42.7 35.8	4217.4 4214.2	5050						
48N/01W-34R01 "	4250.0	10/25/84 04/15/85	41.8 53.8	4194.5 4202.4	5050						
48N/01W-34C01 "	4250.0	10/25/84 04/15/85	71.8 67.3	4203.5 4217.4	5050						
48N/01W-34C02 "	4250.0	10/25/84 04/15/85	41.8 43.3	4203.5 4204.1	5050						

TABLE D (CONTINUED)
GROUND WATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND TO WATER	WATER SURFACE ELEV.	AGENCY	STATE WELL NUMBER	GROUND SURFACE ELEVATION	DATE	GROUND TO WATER	WATER SURFACE ELEV.	AGENCY
F F-08 F-08.A	NORTH COAST HR TRINIDAD HIL BIG LAGOON HA					F F-10	NORTH COAST HR EUREKA PLAIN HU				
09N/01W-24C01 H	105.0	10/29/84 03/13/85	27.8 23.2	77.2 81.8	5050	06N/01E-07M01 H	11.0	10/24/84 03/13/85	7.5 4.4	3.5 0.4	5050
						06N/01E-17001 H	21.0	10/24/84 03/13/85	15.6 10.3	5.4 10.7	5050
						06N/01E-19001 H	19.0	10/24/84 03/13/85	13.5 9.8	5.5 9.2	5050
						06N/01W-16M01 H	10.0	10/24/84 03/13/85	14.0(4) 14.0	-4.0 -4.0	*050

TABLE D (CONTINUED)
GROUNDWATER LEVELS AT WELLS

STATE WELL NUMBER	GROUND- SURFACE ELEVATION	DATE	GROUND- TO WATER	WATER SURFACE ELEV.	AGENCY	STATE WELL NUMBER	GROUND- SURFACE ELEVATION	DATE	GROUND- TO WATER	WATER SURFACE ELEV.	AGENCY
F-11 F-11.4 F-11.41	KNIGHT CREEK BR FEL RIVER MFL INVER FEL RIVER MFL FRANKLIN MFL										
02N/01W-00R01 M	34.0	10/24/84 03/12/85	23.6 18.7	10.4 15.3	5050						
03N/01W-14N01 M	14.0	10/24/84 03/12/85	4.0 5.0	9.0 10.0	5050						
03N/01W-30N01 M	14.0	10/24/84 03/12/85	15.3 13.4	-1.3 1.6	5050						
03N/01W-34J01 M	43.0	10/24/84 03/12/85	NM=2 NM=2		5050						
03N/02W-13J01 M	10.0	10/24/84 03/12/85	7.0 5.0	3.0 5.0	5050						
03N/02W-34C02 M	13.0	10/24/84 03/12/85	13.1 6.3	2.9 0.7	5050						
F-11.0 F-11.03	SOUTH FORK FEL RIVER MFL LAYTONVILLE MFL										
21N/14W-30N01 M	14.0	10/23/84 03/12/85	14.5 3.6	1471.5 1464.4	5050						
21N/15W-01L02 M	14.0	10/23/84 03/12/85	20.0 4.0	1462.0 1474.0	5050						
21N/15W-12M02 M	14.0	10/23/84 03/12/85	17.0 4.8	1413.0 1425.2	5050						
21N/15W-24A01 M	14.0	10/23/84 03/12/85	13.0 2.4	1440.0 1450.6	5050						
F-11.0 F-11.03	HUPPES MAIN FEL RIVER MFL MILLET CREEK MFL										
18N/13W-04J01 M	13.0	10/23/84 03/12/85	8.2 4.6	1331.8 1339.4	5050						
18N/13W-17J01 M	13.0	10/23/84 03/12/85	13.0 3.0	1356.4 1366.1	5050						
18N/13W-19C01 M	13.0	10/23/84 03/12/85	21.7 19.0	1343.3 1346.0	5050						
18N/13W-20H04 M	13.0	10/23/84 03/12/85	15.0 1.3	1370.0 1383.7	5050						
19N/13W-12F01 M	13.0	10/23/84 03/12/85	12.5 5.2	1334.5 1341.8	5050						
19N/13W-32L02 M	13.0	10/23/84 03/12/85	12.5 5.5	1337.5 1344.5	5050						
19N/13W-32L03 M	13.0	10/23/84 03/12/85	12.0 4.6	1339.3 1340.1	5050						
F-11.0 F-11.02	MIDDLE FORK FEL RIVER MFL MILLET CREEK MFL										
22N/12W-04R01 M	13.0	10/23/84 03/12/85	14.0 6.1	1334.1 1344.3	5050						
22N/12W-04E07 M	13.0	10/23/84 03/12/85	14.0 3.0	1378.4 1391.1	5050						
22N/12W-06L03 M	13.0	10/23/84 03/12/85	1.0 -5.4	1366.1 1375.5	5050						
22N/12W-17G01 M	13.0	10/23/84 03/12/85	14.0 3.0	1337.4 1345.1	5050						
22N/13W-01R01 M	14.0	10/23/84 03/12/85	33.0 6.0	1360.0 1411.1	5050						
22N/13W-12A01 M	14.0	10/23/84 03/12/85	33.8 7.2	1366.2 1387.4	5050						
22N/13W-12A01 M	14.0	10/23/84 03/12/85	26.7 4.0	1373.3 1391.1	5050						
23N/13W-20F03 M	14.0	10/23/84 03/12/85	0.0 4.0	1350.1 1358.0	5050						
23N/13W-34C03 M	14.0	10/23/84 03/12/85	31.0 10.4	1374.4 1384.8	5050						

APPENDIX E

GROUND WATER QUALITY



APPENDIX E

GROUND WATER QUALITY

Appendix E presents the results of mineral analyses of ground water samples collected in the North Coastal Area from October 1, 1984 to September 30, 1985. The number of ground water stations precludes plotting each individual location on a map in this publication. Instead, the location of the basins from which the samples were obtained are shown in Figure 8.

The well data are grouped by areal code. The areal code is explained on page 2. Individual areal code numbers can be found in the tables to the left of the areal names. The wells listed thereunder are in that areal code boundary. Each new code is in ascending order. To facilitate station location, a cross reference on the following page relates the areal code given in the tables to the ground water basin in which the station is located.

The location of a well can be approximated by the well number. The numbering system for the wells is based on township, range, and section subdivisions of the public land survey as described in Appendix D, page 67.

In order to increase the amount of information in the water quality tables, multiple headings are used at the top of the column, and data are tabulated respectively. For example, the first column of Table E shows the date of sampling printed above the time of sampling so the data are tabulated in that order. If a part of the values for a multiple heading column are obtained, they will appear in the column with respect to the heading positions. If dashes (or no data) appear in a column, it means no data was obtained.

Abbreviations and codes used in the table are explained on page 84.

**APPENDIX E CROSS REFERENCE;
GROUND WATER BASIN—AREAL CODE**

<u>Ground Water Basin</u> No.	Name	Hydrologic Area*	Areal Code**
1-1	Smith River Plain	<u>SMITH RIVER</u> Lower Smith River Smith River Plain	<u>HU</u> HA HSA F-03.A1
1-3	Butte Valley	<u>KLAMATH RIVER</u> Butte Valley Macdoel-Dorris	<u>HU</u> HA HSA F-05.H1
1-4	Shasta Valley	Shasta Valley	HA F-05.E
1-5	Scott River Valley	Scott River Scott Valley	HA HSA F-05.D2
1-6	Hayfork Valley	<u>TRINITY RIVER</u> South Fork Trinity River	<u>HU</u> HA HSA F-06.B5
1-8	Mad River Valley	<u>MAD RIVER</u> Blue Lake	<u>HU</u> HA F-09.A
1-9	Eureka Plain	<u>EUREKA PLAIN</u>	<u>HU</u> F-10
1-10	Eel River Valley	<u>EEL RIVER</u> Lower Eel River Ferndale	<u>HU</u> HA HSA F-11.A1
1-11	Round Valley	Middle Fork Eel River Round Valley	HA HSA F-11.G2
1-12	Laytonville Valley	South Fork Eel River Laytonville	HA HSA F-11.C3
1-42	Sherwood Valley	Upper Main Eel River Outlet Creek	HA HSA F-11.F1

Note: All of the above hydrologic areas are in the North Coast Hydrologic Basin (HB).

*See page 2.

**See Figure 2.

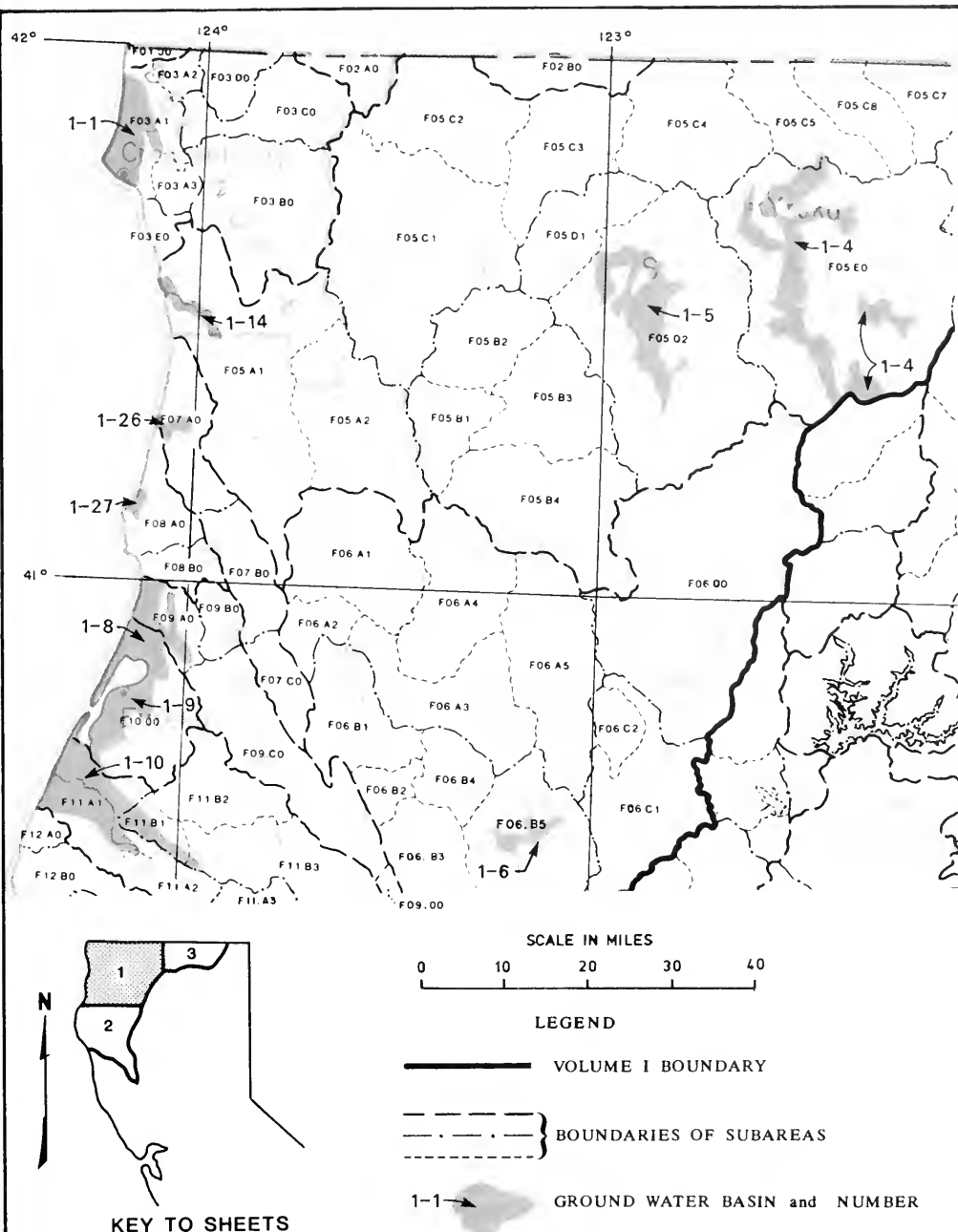


Figure 8 LOCATION OF GROUND WATER BASINS - QUALITY

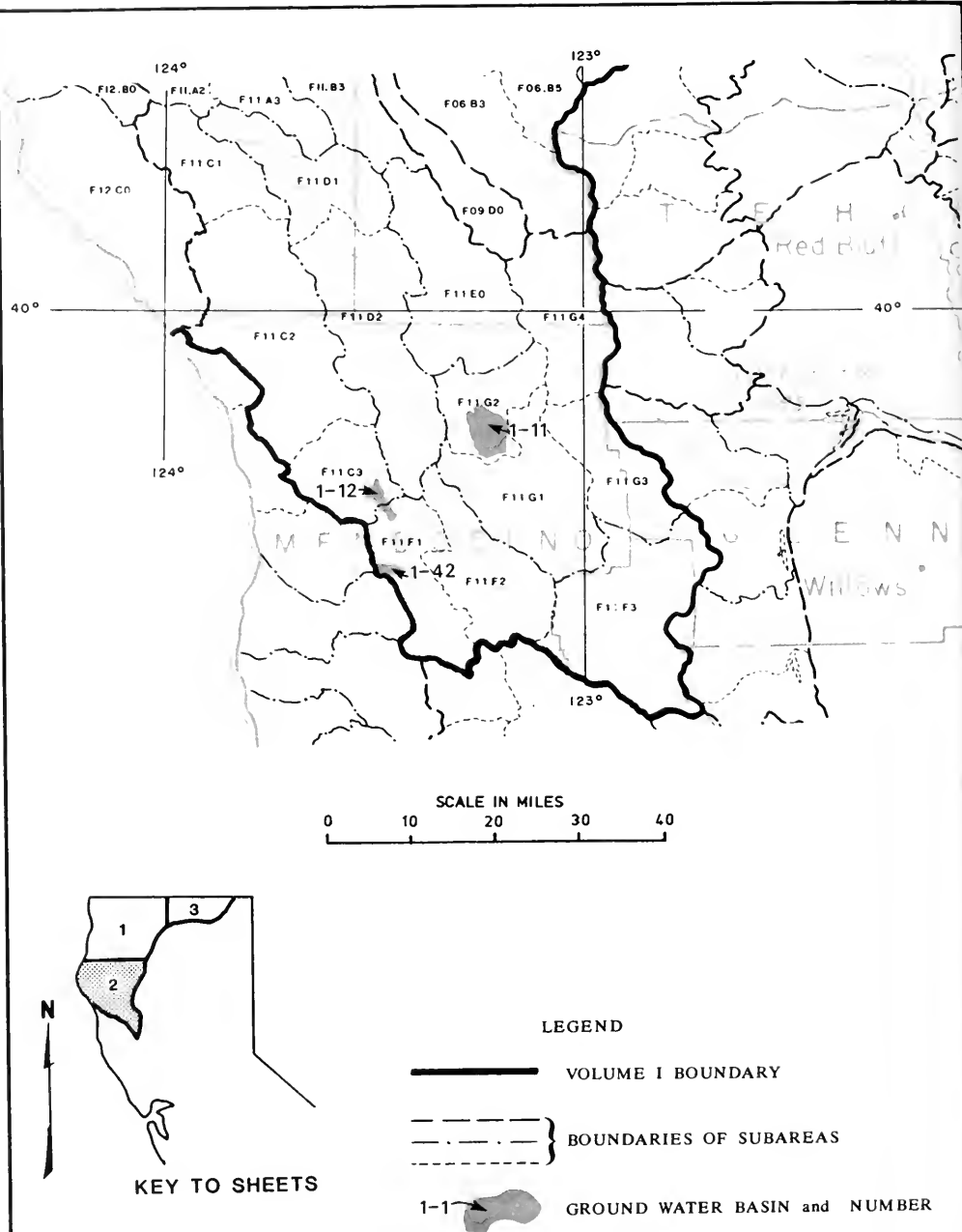


Figure 8 LOCATION OF GROUND WATER BASINS - QUALITY

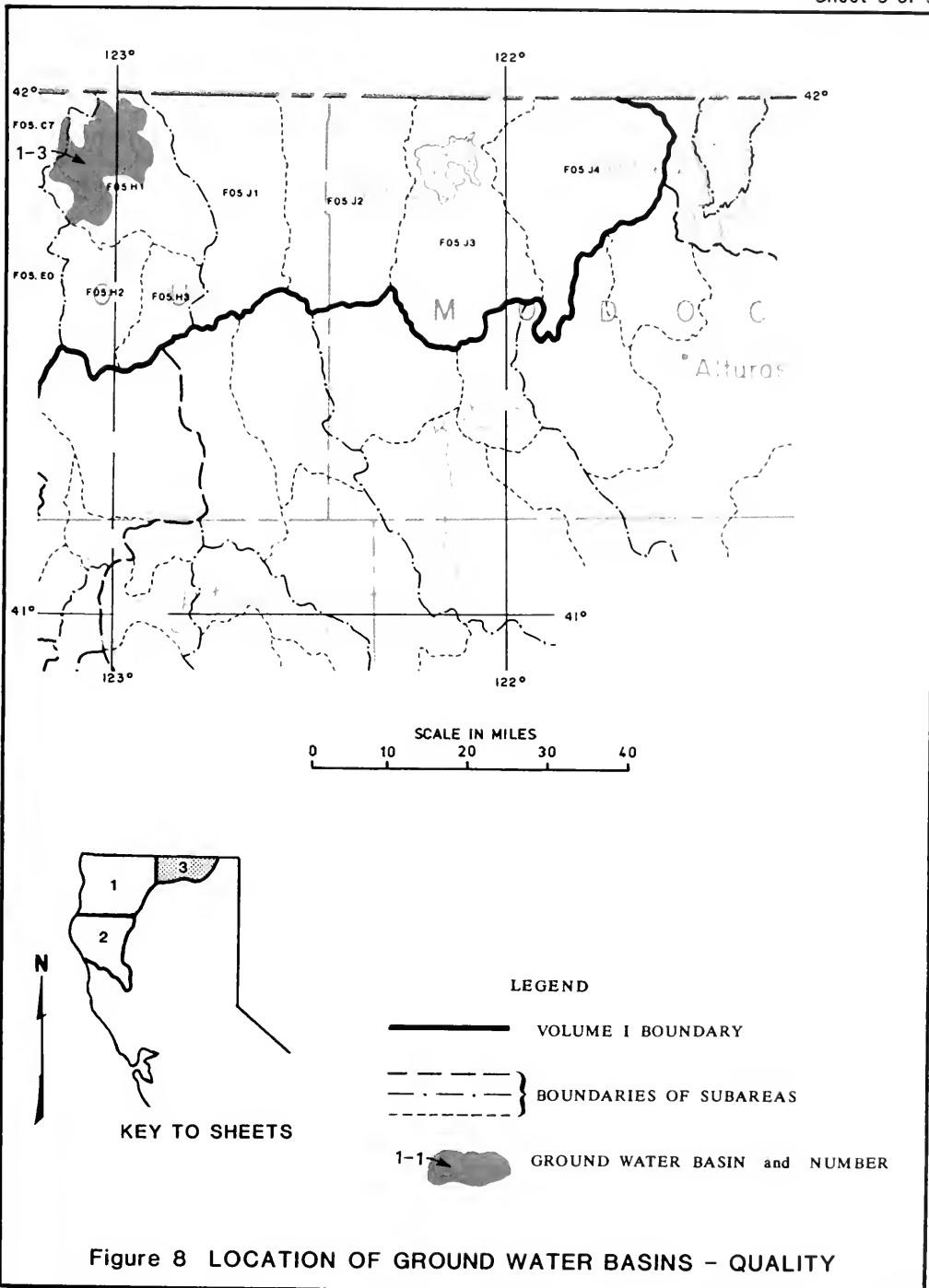


Figure 8 LOCATION OF GROUND WATER BASINS - QUALITY

TABLE E MINERAL ANALYSES OF GROUND WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations and Constituents

TIME	-	Pacific Standard Time on a 24-hour clock			
G. H.	-	Instantaneous gage height in feet above an established datum			
Q	-	Instantaneous discharge in cubic feet per second (E = Estimated)			
DO	-	Dissolved oxygen content in milligrams per liter			
SAT	-	Percent of normal dissolved oxygen saturation			
TEMP	-	Water temperature at time of sampling in degrees Fahrenheit (F) or Celcius (C)			
Field	-	Determined in the field			
Laboratory	-	Determined in the laboratory			
pH	-	Measure of acidity or alkalinity of water			
EC	-	Electrical conductance in microseimens at 25°C			
Constituents:					
	B	-	Boron	K	- Potasasium
	CA	-	Calcium	MG	- Magnesium
	CACO3	-	Calcium Carbonate	NA	- Sodium
	CL	-	Chloride	NO3	- Nitrate
	F	-	Fluoride	SIO2	- Silica
				SO4	- Sulfate

Boron, Fluoride, and Silica are reported in milligrams per liter. The other minerals are reported in each of three units: milligrams per liter, milliequivalents per liter, and percent reactance value; accordingly, each observation can use three lines of tabulation.

MILLIEQUIVALENTS PER LITER is the concentration in Mg/l divided by the equivalent weight of the ion.

PERCENT REACTANCE VALUE is determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter, arriving at a percentage.

TURB	-	Jackson Turbidity Units measured with a Hach Nephelometer (A), if in the field (F)
TDS	-	Gravimetric determination of total dissolved solids at 180°C (value followed by * is a determination of 105°C)
SUM	-	Total dissolved solids by summation of analyzed constituents minus 40 percent of carbonate weight
TH	-	Total Hardness
NCH	-	Noncarbonate hardness - any excess of total hardness over total alkalinity
		Adjusted sodium absorption ratio
SAR	-	Sodium Absorption ratio
ASAR	-	Adjusted sodium adsorption ratio
REM	-	Remarks; code letter are:
	T	- Total dissolved solids and the calculated sum of constituents are not within 20 percent of each other.
	S	- The anion sum and cation sum for a complete analysis is not within the prescribed tolerance of ± 5 percent.
	X	- The field EC and the lab EC are not within 20 percent of each other.

TABLE 2																		
MINERAL ANALYSES OF GROUND WATER																		
DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
					CA	MG	NA	K	CO3	HCO3	CL	NO3	SO4	SI02	TDS SUM	TH MCM		SAR A.A.R
NORTH COAST HR SMITH RIVER HU LOWER SMITH RIVER HA SMITH RIVER PLAIN HSA																		
10/10/84 1430	5050 0050	58.0F 14.4C	7.0 6.1	277 282	19 36	12 37	14 24	45 .01	109 2.18	1.0 .62	11 .31	1.7 .03	40 --	-- --	147 127	97 0	0.7 1.1	T
09/17/85 0910	5050 0000	58 F 14 C	7.0	282	--	--	--	--	--	--	--	--	--	--	--	--	--	
15N/D14-20401 H																		
10/10/84 1340	5050 0000	57.0F 13.9C	6.8	192	--	--	--	--	--	--	--	--	--	--	--	--	--	S
09/17/85 0750	5050 0050	58.0F 14.4C	6.3 6.2	190 192	5.0 14	12 55	13 31	-- --	5.0 1.00	--	13 .91	3.4 .14	-- --	--	--	62 12	0.7 0.7	S
16N/D24-13E01 H																		
10/10/84 1400	5050 0000	56.0F 13.0C	6.8	390	--	--	--	--	--	--	--	--	--	--	--	--	--	
09/17/85 0735	5050 0000	60 F 14 C	6.2	322	--	--	--	--	--	--	--	--	--	--	--	--	--	
17N/D14-14C02 H																		
09/17/85 0943	5050 0050	59.0F 15.0C	7.0 6.4	210 209	4.0 .20	21 1.73	6.0 .25	-- --	91 1.62	--	9.3 .25	3.8 .06	-- --	--	--	96 5	0.3 0.4	S
18N/D14-34402 H																		
09/17/85 0920	5050 0000	58 F 14 C	7.0	395	--	--	--	--	--	--	--	--	--	--	--	--	--	S
KLAMATH RIVER HU SCOTT RIVER HA SCOTT VALLEY HSA																		
07/08/85 1350	5050 0050	65.0F 10.3C	6.4 6.3	61 58	7.0 35	2.0 15	3.0 13	4 .01	27 .54	1.0 .06	1.4 .03	2 .00	40 --	--	42 31	26 0	0.3 0.1	E T
42N/D04-27401 H																		
07/08/85 1330	5050 0000	62.0F 16.7C	7.1	167	--	--	--	--	--	--	--	--	--	--	--	--	--	S
43N/D04-29402 H																		
07/08/85 1330	5050 0000	64.0F 17.8C	7.1	540	--	--	--	--	--	--	--	--	--	--	--	--	--	
43N/D04-02501 H																		
07/08/85 1125	5050 0000	64.0F 17.8C	7.1	540	--	--	--	--	--	--	--	--	--	--	--	--	--	
43N/D04-03401 H																		
07/08/85 1255	5050 0050	60.0F 15.5C	6.7 6.6	310 250	25 1.25	8.3 .65	11 .48	49 .02	79 1.98	10 .21	2.0 .05	3 .00	40 --	--	144 116	96 0	0.5 0.7	E S
43N/D04-29402 H																		
07/08/85 1200	5050 0000	64.0F 17.8C	6.3	68	--	--	--	--	--	--	--	--	--	--	--	--	--	S
43N/D04-11E01 H																		
07/08/85 1225	5050 0000	59.0F 15.0C	6.6	92	--	--	--	--	--	--	--	--	--	--	--	--	--	S
44N/D04-34401 H																		
07/08/85 1140	5050 0050	73.0F 22.8C	6.9 6.3	320 305	39 1.95	14 1.15	6.0 .26	-- --	134 2.68	--	2.0 .06	15.0 .24	-- --	--	--	155 21	0.2 0.4	S
F-05.E SHASTA VALLEY HA																		
07/08/85 0950	5050 0000	67.0F 20.0C	6.8	740	--	--	--	--	--	--	--	--	--	--	--	--	--	S
42N/D04-20401 H																		
07/08/85 1125	5050 0000	61.0F 16.																

TABLE E (CONTINUED)
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH	FIELD EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REMARKS
					CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	8	F	TDS	TH	SAR	ASAR	
F-05 F-05-E																					
NORTH COAST HB KLAATH RIVER MU SHASTA VALLEY HA																					
07/09/85	5050	59.0F	7.3	485	26	21	--	--	--	--	2.0	--	--	--	--	--	152				
1035	5050	15.0C		356	1.30	1.73					.06										
07/09/85	5050	61.0F	7.3	1414	--	--	--	--	--	--	--	--	--	--	--	--	--				
1315	0000	16.1C																			
07/09/85	5050	64.0F	7.4	645	--	--	--	--	--	--	--	--	--	--	--	--	--				
1245	0000	17.8C																			
F-05-H F-05-H1																					
07/08/85	5050	8.1	970	9.0	7.0	220	1.5	486	4.0	29	.0	7.7	--	595	52	13.3					
0855	5050	8.5	956	4.5	.36	9.57	.05	9.71	.06	.82	.00		--	570	0	24.3					
F-05-H F-05-H1																					
07/09/85	5050	60.0F	7.7	475	46	20	26	.6	194	21	12	17.0	--	286	197	3.8					
0925	5050	15.5C	8.2	455	2.30	1.64	1.13	.02	3.08	.44	.34	.27	--	259	3	1.7					
F-05-H F-05-H1																					
07/09/85	5050	60.0F	7.5	345	--	--	--	--	--	--	--	--	--	--	--	--	--				
0755	0000	20.5C																			
F-05-H F-05-H1																					
07/09/85	5050	60.0F	8.3	495	--	--	--	--	--	--	--	--	--	--	--	--	--				
0855	0000	15.5C																			
F-05-H F-05-H1																					
07/09/85	5050	58.0F	7.5	710	--	--	--	--	--	--	--	--	--	--	--	--	--				
0815	0000	14.4C																			
F-05-H F-05-H1																					
07/09/85	5050	60.0F	7.4	540	--	--	--	--	--	--	--	--	--	--	--	--	--				
0740	0000	15.5C																			
F-05-H F-05-H1																					
07/10/85	5050	58.0F	7.6	190	--	--	--	--	--	--	--	--	--	--	--	--	--				
1540	0000	14 C																			
F-05-H F-05-H1																					
07/10/85	5050	75.0F	8.1	460	7.0	5.0	62	--	176	--	24	--	--	38	5.8						
1345	5050	23.9C	8.5	455	.35	.41	3.57	62	3.52		.68		--	0	7.7						
F-05-H F-05-H1																					
07/10/85	5050	59.0F	7.7	800	--	--	--	--	--	--	--	--	--	--	--	--	--				
1240	0000	15.0C																			
F-05-H F-05-H1																					
08/30/85	5050	59.0F	8.0	400	--	--	--	--	--	--	--	--	--	--	--	--	--				
1200	0000	15.0C																			
F-05-H F-05-H1																					
07/10/85	5050	71.5F	7.9	225	--	--	--	--	--	--	--	--	--	--	--	--	--				
1320	0000	21.9C																			
F-05-H F-05-H1																					
07/11/85	5050	59.0F	7.0	120	--	--	--	--	--	--	--	--	--	--	--	--	--				
1010	0000	15.0C																			
F-05-H F-05-H1																					
08/29/85	5050	50.0F	6.6	200	--	--	--	--	--	--	--	--	--	--	--	--	--				
1300	0000	10.0C																			
F-05-H F-05-H1																					
08/29/85	5050	56.0F	7.5	600	--	--	--	--	--	--	--	--	--	--	--	--	--				
1400	0000	13.3C																			
F-05-H F-05-H1																					
07/10/85	5050	62.0F	7.6	465	--	--	--	--	--	--	--	--	--	--	--	--	--				
1515	0000	16.7C																			
F-05-H F-05-H1																					
08/29/85	5050	50.0F	7.8	320	--	--	--	--	--	--	--	--	--	--	--	--	--				
1320	0000	10.0C																			

TABLE E (CONTINUED)
MINERAL ANALYSES OF GROUND WATER

[illegible]

TABLE E (CONTINUED)
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REMARKS
			CA	MG	NA	K	CAC03	SO4	CL	NO3	TDS SUM	TH MCH	SAR ASAR					

F-10		NORTH COAST HB EUREKA PLAIN MU																
05N/DLE-20001 M																		
10/11/84	5050	55.0F	7.1	300	--	--	--	--	--	--	--	--	--	--	--	\$		
1030	0000	12.8C																
08/28/85																		
1030	5050	55.0F	6.9	300	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.8C																
10/11/84																		
0930	5050	62.0F	6.8	478	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	16.7C																
08/28/85																		
0750	5050	60.0F	6.8	460	40	26	--	--	--	24	--	--	--	--	207	\$		
	5050	15.5C		442	2.00	2.14				.68								
08/28/85																		
0810	5050	55.0F	6.4	420	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.8C																
08/28/85																		
0830	5050	56.0F	6.9	740	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	13.3C																
10/11/84																		
1000	5050	55.0F	7.4	395	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.8C																
08/28/85																		
0845	5050	55.0F	7.3	390	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.8C																
10/11/84																		
1010	5050	58.0F	7.3	390	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	14.4C																
08/28/85																		
0905	5050	57.0F	7.3	400	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	13.9C																
10/11/84																		
1250	5050	65.0F	7.7	160	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	18.3C																
10/11/84																		
1210	5050	59.0F	7.5	435	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	15.0C																
08/28/85																		
1240	5050	59.0F	7.6	430	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	15.0C																
10/11/84																		
1300	5050	54.0F	7.3	155	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.2C																
08/28/85																		
1225	5050	53.0F	7.3	155	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	11.7C																
10/11/84																		
1120	5050	55.0F	7.1	263	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	12.8C																
08/28/85																		
1105	5050	50.0F	6.4	315	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	10.0C																
10/11/84																		
1020	5050	57.0F	7.2	440	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	13.9C																
08/28/85																		
0920	5050	56.0F	7.2	440	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	13.3C																
F-11 EEL RIVER MU F-11.A LOWER EEL RIVER MU F-11.A1 FERNDALE MSA																		
10/11/84	5050	61.0F	6.8	535	--	--	--	--	--	--	--	--	--	--	--	\$		
1440	0000	16.1C																
08/28/85																		
1600	5050	56.0F	6.6	570	--	--	--	--	--	--	--	--	--	--	--	\$		
	0000	15.3C																

TABLE E (CONTINUED)

MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER PERCENT REACTANTS PER LITER				MILLIGRAMS PER LITER								REMARKS
			CA	MG	NA	K	CaCO3	SO4	CL	NO3	TURP	SIO2	TOC	TM	SAR	ASAR					
NORTH COAST NB EEL RIVER MU LOWER EEL RIVER MA FERDALE HSA																					
10/11/84 1410	5050 0000	F-11 F-11.A F-11.A1 03M/01W-18#01 H	66.0F 00.00	7.3	525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
08/25/85 1201	5050 0050		63.0F 17.2C	7.4 8.7	560 511	33 1.65	38 3.13	21 .91	2.6 .07	233 4.66	33 .69	14 .39	.1 .00	.6 0	--	286 281	239 6	0.6 1.3			
03M/01W-19C01 H																					
10/11/84 1420	5050 0050		57.0F 13.9C	7.1 8.3	550 536	25 1.25	35 2.98	39 1.70	-- .29	219 4.38	--	30 .85	--	--	--	--	207 0	1.2 2.5		S	
08/28/85 1415	5050 0000		58.0F 14.4C	7.0	580	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
03M/01W-30G01 H																					
10/11/84 1500	5050 0050		58.0F 14.4C	6.8 8.1	640 578	30 1.50	35 2.88	38 1.65	2.2 .26	208 4.16	2.0 .04	64 1.80	4.7 .08	.0 1	--	332 301	219 11	1.1 2.4			
08/28/85 1615	5050 0000		58.0F 14.4C	6.7	700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
03M/01W-36G02 H																					
10/11/84 1510	5050 0000		60.0F 15.5C	8.6	850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
03M/02W-32G01 H																					
10/11/84 1610	5050 0000		63.0F 17.2C	7.3	740	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
08/28/85 1530	5050 0000		62.0F 14.7C	7.2	760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
03M/02W-35M02 H																					
10/11/84 1540	5050 0050		55.0F 12.8C	7.1 8.5	700 651	22 1.10	30 2.47	72 3.13	-- .47	272 5.43	--	35 .99	1.5 .02	--	--	--	179 0	2.3 5.0		S	
03/28/85 1500	5050 0000		55.0F 12.8C	7.0	700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
04M/02W-35E01 H																					
10/11/84 1340	5050 0050		58.0F 14.4C	6.8 8.0	415 410	12 .60	17 1.40	37 1.61	1.0 .03	44 .88	7.0 .15	87 2.44	3.9 .06	.6 2	--	239 191	100 56	1.6 1.9		T	
08/28/85 1330	5050 0000		53.0F 11.7C	6.7	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
SOUTH FORK EEL RIVER MA LAYTONVILLE HSA																					
07/26/85 0915	5050 0000	F-11.C F-11.C3 21M/14W-30M01 H	70.0F 21.1C	6.7	215	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
21M/15W-01L02 H																					
07/26/85 1000	5050 0000		68.0F 20.0C	7.3	430	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
21M/15W-12M02 H																					
07/26/85 0940	5050 0000		62.3F 16.7C	5.9	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
UPPER MATM EEL RIVER MA OUTLET CREEK HSA																					
07/26/85 0750	5050 0000	F-11.F F-11.F1 18M/13W-08L01 H	63.3F 17.2C	6.3	290	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
15M/13W-20M04 H																					
07/26/85 0730	5050 0000		72.0F 22.2C	7.0	295	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	
MIDDLE FORK EEL RIVER MA KODU VALLEY HSA																					
07/26/85 1150	5050 0000	F-11.G F-11.G2 22M/12W-06L02 H	60.0F 14.5C	7.3	340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S	

TABLE E (CONTINUED)
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN	MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REMARKS
					CA	MG	NA	K	PERCENT REACTANCE VALUE (CACD)	SO4	CL	NO3	TURB	SiO2	TDS	TH	SAR	ASAR	
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Inquiries regarding specific stations or local data should be directed to the Department of Water Resources offices shown below:

<u>County</u>	<u>District Office</u>
Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, and Trinity	Northern District P. O. Box 607 2440 Main Street Red Bluff, CA 96080 (916) 527-6530
Alameda, Alpine, Amador, Calaveras, Contra Costa, El Dorado, Marin, Mendocino, Mono (North), Napa, Nevada, Placer, Sacramento, San Francisco, San Joaquin, San Mateo, Santa Clara, Sierra, Solano, Sonoma, Sutter, Tuolumne, Yolo, and Yuba	Central District 3521 "S" Street Sacramento, CA 95816-7017 (916) 445-6831
Fresno, Kern (valley), Kings, Madera, Mariposa, Merced, Monterey, San Benito, Santa Cruz, Stanislaus, and Tulare	San Joaquin District 3374 East Shields Avenue Fresno, CA 93726-6990 (209) 445-5443
Imperial, Inyo, Kern (desert), Los Angeles, Orange, Riverside, Mono (South), San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura	Southern District P. O. Box 6598 849 South Broadway, Suite 500 Los Angeles, CA 90055-1598 (213) 620-4107

Inquiries regarding statewide data should be directed to the Division of Planning:

Department of Water Resources
Division of Planning
Statewide Data Coordinator
P. O. Box 942836
Sacramento, CA 94236-0001
(916) 445-7314

State of California—Resources Agency
Department of Water Resources
P.O. Box 942836
Sacramento CA 94236-0001



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